

Hepatitis B is spread through contact with blood. An infected family member or caregiver can pass the virus to an infant.

A pregnant woman who has hepatitis B can pass the virus to her infant at birth, but the vaccine can help prevent the baby from getting infected.

Most people living with hepatitis B got infected as infants or young children when their immune systems were not fully developed.

WHY SHOULD MY BABY BE VACCINATED AGAINST HEPATITIS B?



- The hepatitis B vaccine can prevent a baby from getting infected. CDC recommends all babies get the first hepatitis B vaccine shot at birth and follow the vaccine schedule to get the remaining shots.
- The hepatitis B vaccine is safe and effective.
- Delaying the first dose of the hepatitis B vaccine can put your baby at risk for hepatitis B.
- The hepatitis B vaccine has helped prevent millions of infants from getting hepatitis B, which can be a deadly disease.

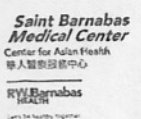
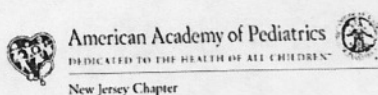
New Jersey Ranks Low Nationally(48th out of 51) in HBV Birth Dose Administration

The New Jersey Immunization Network, in partnership with Saint Barnabas Medical Center, Rutgers University and the New Jersey Chapter, American Academy of Pediatrics encourage you to view a new on-demand educational module on administration of the birth dose of the Hepatitis B vaccine. Topics featured in this free webinar include:

- What is Hep B and why is it a New Jersey issue?
- What are the issues with perinatal transmission? Besides the mother, how else can an infant acquire HBV?
- How are pregnant women with HBV identified and what prenatal care is recommended?
- Best practices at delivery centers to achieve universal HBV birth dose administration
- Importance of HBV testing in infants born to HBV positive mothers

Access the webinar here: <http://bit.ly/perinatalhepb>

This educational opportunity has been made possible through a grant from the NJ Department of Health



HOW IS HEPATITIS B SPREAD?



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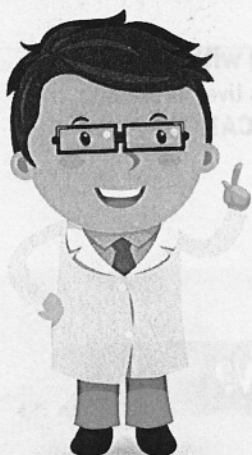


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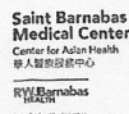
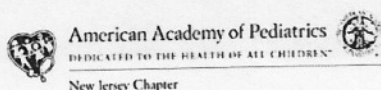
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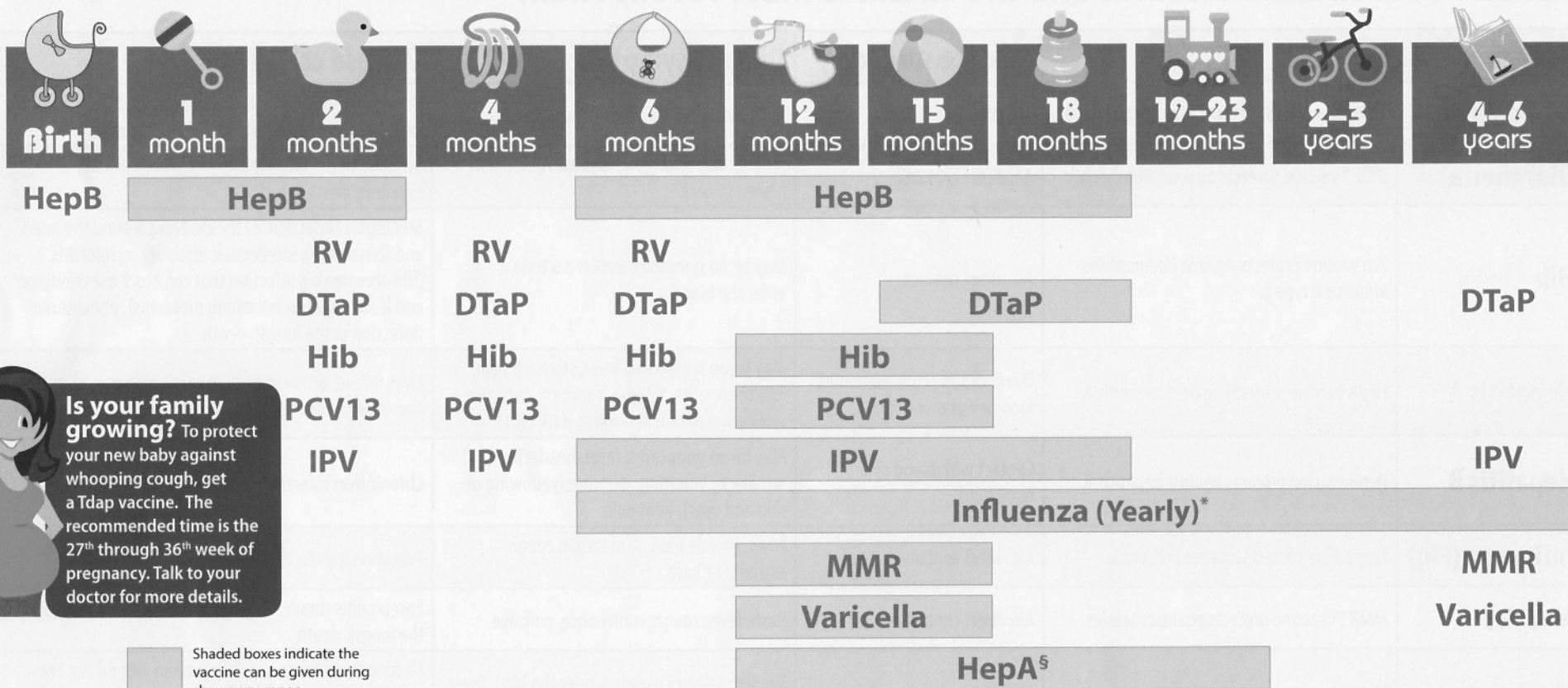
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2019 Recommended Immunizations for Children from Birth Through 6 Years Old



Is your family growing? To protect your new baby against whooping cough, get a Tdap vaccine. The recommended time is the 27th through 36th week of pregnancy. Talk to your doctor for more details.

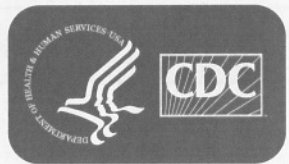
Shaded boxes indicate the vaccine can be given during shown age range.

NOTE:
If your child misses a shot, you don't need to start over. Just go back to your child's doctor for the next shot. Talk with your child's doctor if you have questions about vaccines.

FOOTNOTES:
* Two doses given at least four weeks apart are recommended for children age 6 months through 8 years of age who are getting an influenza (flu) vaccine for the first time and for some other children in this age group.
§ Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 months after the last dose. HepA vaccination may be given to any child 12 months and older to protect against hepatitis A. Children and adolescents who did not receive the HepA vaccine and are at high risk should be vaccinated against hepatitis A.
If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines that he or she may need.

See back page for more information on vaccine-preventable diseases and the vaccines that prevent them.

For more information, call toll-free
1-800-CDC-INFO (1-800-232-4636)
or visit
www.cdc.gov/vaccines/parents



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

Vaccine-Preventable Diseases and the Vaccines that Prevent Them

Disease	Vaccine	Disease spread by	Disease symptoms	Disease complications
Chickenpox	Varicella vaccine protects against chickenpox.	Air, direct contact	Rash, tiredness, headache, fever	Infected blisters, bleeding disorders, encephalitis (brain swelling), pneumonia (infection in the lungs)
Diphtheria	DTaP* vaccine protects against diphtheria.	Air, direct contact	Sore throat, mild fever, weakness, swollen glands in neck	Swelling of the heart muscle, heart failure, coma, paralysis, death
Hib	Hib vaccine protects against <i>Haemophilus influenzae</i> type b.	Air, direct contact	May be no symptoms unless bacteria enter the blood	Meningitis (infection of the covering around the brain and spinal cord), intellectual disability, epiglottitis (life-threatening infection that can block the windpipe and lead to serious breathing problems), pneumonia (infection in the lungs), death
Hepatitis A	HepA vaccine protects against hepatitis A.	Direct contact, contaminated food or water	May be no symptoms, fever, stomach pain, loss of appetite, fatigue, vomiting, jaundice (yellowing of skin and eyes), dark urine	Liver failure, arthralgia (joint pain), kidney, pancreatic and blood disorders
Hepatitis B	HepB vaccine protects against hepatitis B.	Contact with blood or body fluids	May be no symptoms, fever, headache, weakness, vomiting, jaundice (yellowing of skin and eyes), joint pain	Chronic liver infection, liver failure, liver cancer
Influenza (Flu)	Flu vaccine protects against influenza.	Air, direct contact	Fever, muscle pain, sore throat, cough, extreme fatigue	Pneumonia (infection in the lungs)
Measles	MMR** vaccine protects against measles.	Air, direct contact	Rash, fever, cough, runny nose, pink eye	Encephalitis (brain swelling), pneumonia (infection in the lungs), death
Mumps	MMR** vaccine protects against mumps.	Air, direct contact	Swollen salivary glands (under the jaw), fever, headache, tiredness, muscle pain	Meningitis (infection of the covering around the brain and spinal cord), encephalitis (brain swelling), inflammation of testicles or ovaries, deafness
Pertussis	DTaP* vaccine protects against pertussis (whooping cough).	Air, direct contact	Severe cough, runny nose, apnea (a pause in breathing in infants)	Pneumonia (infection in the lungs), death
Polio	IPV vaccine protects against polio.	Air, direct contact, through the mouth	May be no symptoms, sore throat, fever, nausea, headache	Paralysis, death
Pneumococcal	PCV13 vaccine protects against pneumococcus.	Air, direct contact	May be no symptoms, pneumonia (infection in the lungs)	Bacteremia (blood infection), meningitis (infection of the covering around the brain and spinal cord), death
Rotavirus	RV vaccine protects against rotavirus.	Through the mouth	Diarrhea, fever, vomiting	Severe diarrhea, dehydration
Rubella	MMR** vaccine protects against rubella.	Air, direct contact	Sometimes rash, fever, swollen lymph nodes	Very serious in pregnant women—can lead to miscarriage, stillbirth, premature delivery, birth defects
Tetanus	DTaP* vaccine protects against tetanus.	Exposure through cuts in skin	Stiffness in neck and abdominal muscles, difficulty swallowing, muscle spasms, fever	Broken bones, breathing difficulty, death

* DTaP combines protection against diphtheria, tetanus, and pertussis.

** MMR combines protection against measles, mumps, and rubella.

Talk to your child's doctor or nurse about the vaccines recommended for their age.

	Flu Influenza	Tdap Tetanus, diphtheria, pertussis	HPV Human papillomavirus	Meningococcal		Pneumococcal	Hepatitis B	Hepatitis A	Polio	MMR Measles, mumps, rubella	Chickenpox Varicella
				MenACWY	MenB						
7-8 Years	Shaded	Shaded		Shaded		Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
9-10 Years	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
11-12 Years	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
13-15 Years	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded
16-18 Years	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded	Shaded


More information: Everyone 6 months and older should get a flu vaccine every year.


All 11- through 12-year olds should get one shot of Tdap.


All 11- through 12-year olds should get a 2-shot series of HPV vaccine. A 3-shot series is needed for those with weakened immune systems and those who start the series at 15 years or older.


All 11- through 12-year olds should get one shot of meningococcal conjugate (MenACWY). A booster shot is recommended at age 16.

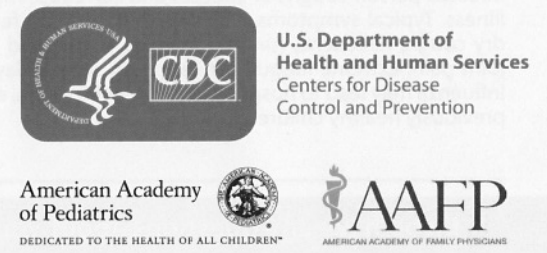
Teens 16–18 years old **may** be vaccinated with a serogroup B meningococcal (MenB) vaccine.

 These shaded boxes indicate when the vaccine is recommended for all children unless your doctor tells you that your child cannot safely receive the vaccine.

 These shaded boxes indicate the vaccine is recommended for children with certain health or lifestyle conditions that put them at an increased risk for serious diseases. See vaccine-specific recommendations at www.cdc.gov/vaccines/hcp/acip-recs/.

 These shaded boxes indicate the vaccine should be given if a child is catching up on missed vaccines.

 This shaded box indicates children not at increased risk may get the vaccine if they wish after speaking to a provider.



Vaccine-Preventable Diseases and the Vaccines that Prevent Them

Diphtheria (Can be prevented by Tdap vaccination)

Diphtheria is a very contagious bacterial disease that affects the respiratory system, including the lungs. Diphtheria bacteria can be spread from person to person by direct contact with droplets from an infected person's cough or sneeze. When people are infected, the bacteria can produce a toxin (poison) in the body that can cause a thick coating in the back of the nose or throat that makes it hard to breathe or swallow. Effects from this toxin can also lead to swelling of the heart muscle and, in some cases, heart failure. In serious cases, the illness can cause coma, paralysis, or even death.

Hepatitis A (Can be prevented by HepA vaccination)

Hepatitis A is an infection in the liver caused by hepatitis A virus. The virus is spread primarily person to person through the fecal-oral route. In other words, the virus is taken in by mouth from contact with objects, food, or drinks contaminated by the feces (stool) of an infected person. Symptoms can include fever, tiredness, poor appetite, vomiting, stomach pain, and sometimes jaundice (when skin and eyes turn yellow). An infected person may have no symptoms, may have mild illness for a week or two, may have severe illness for several months, or may rarely develop liver failure and die from the infection. In the U.S., about 100 people a year die from hepatitis A.

Hepatitis B (Can be prevented by HepB vaccination)

Hepatitis B causes a flu-like illness with loss of appetite, nausea, vomiting, rashes, joint pain, and jaundice. Symptoms of acute hepatitis B include fever, fatigue, loss of appetite, nausea, vomiting, pain in joints and stomach, dark urine, grey-colored stools, and jaundice (when skin and eyes turn yellow).

Human Papillomavirus (Can be prevented by HPV vaccination)

Human papillomavirus is a common virus. HPV is most common in people in their teens and early 20s. About 14 million people, including teens, become infected with HPV each year. HPV infection can cause cervical, vaginal, and vulvar cancers in women and penile cancer in men. HPV can also cause anal cancer, oropharyngeal cancer (back of the throat), and genital warts in both men and women.

Influenza (Can be prevented by annual flu vaccination)

Influenza is a highly contagious viral infection of the nose, throat, and lungs. The virus spreads easily through droplets when an infected person coughs or sneezes and can cause mild to severe illness. Typical symptoms include a sudden high fever, chills, a dry cough, headache, runny nose, sore throat, and muscle and joint pain. Extreme fatigue can last from several days to weeks. Influenza may lead to hospitalization or even death, even among previously healthy children.

Measles (Can be prevented by MMR vaccination)

Measles is one of the most contagious viral diseases. Measles virus is spread by direct contact with the airborne respiratory droplets of an infected person. Measles is so contagious that just being in the same room after a person who has measles has already left can result in infection. Symptoms usually include a rash, fever, cough, and red, watery eyes. Fever can persist, rash can last for up to a week, and coughing can last about 10 days. Measles can also cause pneumonia, seizures, brain damage, or death.

Meningococcal Disease (Can be prevented by meningococcal vaccination)

Meningococcal disease has two common outcomes: meningitis (infection of the lining of the brain and spinal cord) and bloodstream infections. The bacteria that cause meningococcal disease spread through the exchange of nose and throat droplets, such as when coughing, sneezing, or kissing. Symptoms include sudden onset of fever, headache, and stiff neck. With bloodstream infection, symptoms also include a dark purple rash. About one of every 10 people who gets the disease dies from it. Survivors of meningococcal disease may lose their arms or legs, become deaf, have problems with their nervous systems, become developmentally disabled, or suffer seizures or strokes.

Mumps (Can be prevented by MMR vaccination)

Mumps is an infectious disease caused by the mumps virus, which is spread in the air by a cough or sneeze from an infected person. A child can also get infected with mumps by coming in contact with a contaminated object like a toy. The mumps virus causes swollen salivary glands under the ears or jaw, fever, muscle aches, tiredness, abdominal pain, and loss of appetite. Severe complications for children who get mumps are uncommon, but can include meningitis (infection of the lining of the brain and spinal cord), encephalitis (inflammation of the brain), permanent hearing loss, or swelling of the testes, which rarely results in decreased fertility.

Pertussis (Whooping Cough) (Can be prevented by Tdap vaccination)

Pertussis spreads very easily through coughing and sneezing. It can cause a bad cough that makes someone gasp for air after coughing fits. This cough can last for many weeks, which can make preteens and teens miss school and other activities. Pertussis can be deadly for babies who are too young to receive the vaccine. Often babies get whooping cough from their older brothers or sisters, like preteens or teens, or other people in the family. Babies with pertussis can get pneumonia, have seizures, become brain damaged, or even die. About half of children under 1 year of age who get pertussis must be hospitalized.

Pneumococcal Disease (Can be prevented by pneumococcal vaccination)

Pneumonia is an infection of the lungs that can be caused by the bacteria called "pneumococcus." These bacteria can cause other types of infections, too, such as ear infections, sinus infections, meningitis (infection of the lining of the brain and spinal cord), and bloodstream infections. Sinus and ear infections are usually mild and are much more common than the more serious forms of pneumococcal disease. However, in some cases, pneumococcal disease can be fatal or result in long-term problems like brain damage and hearing loss. The bacteria that cause pneumococcal disease spread when people cough or sneeze. Many people have the bacteria in their nose or throat at one time or another without being ill—this is known as being a carrier.

Polio (Can be prevented by IPV vaccination)

Polio is caused by a virus that lives in an infected person's throat and intestines. It spreads through contact with the stool of an infected person and through droplets from a sneeze or cough. Symptoms typically include sore throat, fever, tiredness, nausea, headache, or stomach pain. In about 1% of cases, polio can cause paralysis. Among those who are paralyzed, about 2 to 10 children out of 100 die because the virus affects the muscles that help them breathe.

Rubella (German Measles) (Can be prevented by MMR vaccination)

Rubella is caused by a virus that is spread through coughing and sneezing. In children, rubella usually causes a mild illness with fever, swollen glands, and a rash that lasts about 3 days. Rubella rarely causes serious illness or complications in children, but can be very serious to a baby in the womb. If a pregnant woman is infected, the result for the baby can be devastating, including miscarriage, serious heart defects, mental retardation, and loss of hearing and eyesight.

Tetanus (Lockjaw) (Can be prevented by Tdap vaccination)

Tetanus mainly affects the neck and belly. When people are infected, the bacteria produce a toxin (poison) that causes muscles to become tight, which is very painful. This can lead to "locking" of the jaw so a person cannot open his or her mouth, swallow, or breathe. The bacteria that cause tetanus are found in soil, dust, and manure. The bacteria enter the body through a puncture, cut, or sore on the skin. Complete recovery from tetanus can take months. One to two out of 10 people who get tetanus die from the disease.

Varicella (Chickenpox) (Can be prevented by varicella vaccination)

Chickenpox is caused by the varicella zoster virus. Chickenpox is very contagious and spreads very easily from infected people. The virus can spread from either a cough or sneeze. It can also spread from the blisters on the skin, either by touching them or by breathing in these viral particles. Typical symptoms of chickenpox include an itchy rash with blisters, tiredness, headache, and fever. Chickenpox is usually mild, but it can lead to severe skin infections, pneumonia, encephalitis (brain swelling), or even death.

If you have any questions about your child's vaccines, talk to your child's doctor or nurse.

You're 16...

We recommend these vaccines for you!

You have the rest of your life in front of you. Be sure you're protected against these serious diseases!



This vaccine	helps protect you from...	Dose(s) you need at this age
Meningitis vaccine against types A, C, W, and Y (MenACWY)	the most serious types of meningitis that can cause: <ul style="list-style-type: none"> • Dangerous infections of the brain and spinal cord • Blood infections that can lead to death within 24 hours • Brain injury, limb amputations, deafness, skin grafts, and kidney damage 	MenACWY vaccine <ul style="list-style-type: none"> • Dose #2 at age 16 • (Dose #1 at age 11–12)
Meningitis vaccine against type B (MenB)		MenB vaccine <i>(talk with your provider about this vaccine)</i> <ul style="list-style-type: none"> • Dose #1 at age 16 • Dose #2 is given 1 or 6 months after dose #1, depending on the vaccine brand used
Human Papillomavirus (HPV) vaccine	viruses that can cause: <ul style="list-style-type: none"> • Cancers of the cervix • Cancers of the penis, vagina, vulva, and anus • Cancers of the throat • Genital warts 	HPV vaccine <ul style="list-style-type: none"> • The vaccine series is given as 2 or 3 doses, beginning at age 11–12. • Ask your provider if you're up to date with this vaccine
Flu vaccine (influenza)	a virus that can cause: <ul style="list-style-type: none"> • High fevers • Severe body aches everywhere • Serious complications, including pneumonia, hospitalization, and death 	Influenza vaccine <ul style="list-style-type: none"> • 1 dose every year

If you're behind on your shots, you may need these vaccines, too. Check with your provider.

- Chickenpox (varicella)
- Hepatitis A
- Hepatitis B
- MMR (measles, mumps, rubella)
- Tdap (tetanus, diphtheria, pertussis/whooping cough)
If you're pregnant, you'll need an additional dose.

Remember: Getting shots is better than getting these diseases. Don't miss out on everything life has in store for you. Get protected!



Technical content reviewed by the Centers for Disease Control and Prevention
 Saint Paul, Minnesota • 651-647-9009
www.immunize.org • www.vaccineinformation.org
www.immunize.org/catg.d/p4022.pdf • Item #P4022 (10/17)

