

MMR Vaccine (Measles, Mumps, and Rubella): *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

MMR vaccine can prevent **measles, mumps, and rubella**.

- **MEASLES (M)** causes fever, cough, runny nose, and red, watery eyes, commonly followed by a rash that covers the whole body. It can lead to seizures (often associated with fever), ear infections, diarrhea, and pneumonia. Rarely, measles can cause brain damage or death.
- **MUMPS (M)** causes fever, headache, muscle aches, tiredness, loss of appetite, and swollen and tender salivary glands under the ears. It can lead to deafness, swelling of the brain and/or spinal cord covering, painful swelling of the testicles or ovaries, and, very rarely, death.
- **RUBELLA (R)** causes fever, sore throat, rash, headache, and eye irritation. It can cause arthritis in up to half of teenage and adult women. If a person gets rubella while they are pregnant, they could have a miscarriage or the baby could be born with serious birth defects.

Most people who are vaccinated with MMR will be protected for life. Vaccines and high rates of vaccination have made these diseases much less common in the United States.

2. MMR vaccine

Children need 2 doses of MMR vaccine, usually:

- First dose at age 12 through 15 months
- Second dose at age 4 through 6 years

Infants who will be traveling outside the United States when they are between 6 and 11 months of age should get a dose of MMR vaccine before travel. These children should still get 2 additional doses at the recommended ages for long-lasting protection.

Older children, adolescents, and adults also need 1 or 2 doses of MMR vaccine if they are not already

immune to measles, mumps, and rubella. Your health care provider can help you determine how many doses you need.

A third dose of MMR might be recommended for certain people in mumps outbreak situations.

MMR vaccine may be given at the same time as other vaccines. Children 12 months through 12 years of age might receive MMR vaccine together with varicella vaccine in a single shot, known as MMRV. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of MMR or MMRV vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant** or thinks they might be pregnant—pregnant people should not get MMR vaccine
- Has a **weakened immune system**, or has a **parent, brother, or sister with a history of hereditary or congenital immune system problems**
- Has ever had a **condition that makes him or her bruise or bleed easily**
- Has recently had a **blood transfusion or received other blood products**
- Has **tuberculosis**
- Has **gotten any other vaccines in the past 4 weeks**

In some cases, your health care provider may decide to postpone MMR vaccination until a future visit.



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

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting MMR vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Sore arm from the injection or redness where the shot is given, fever, and a mild rash can happen after MMR vaccination.
- Swelling of the glands in the cheeks or neck or temporary pain and stiffness in the joints (mostly in teenage or adult women) sometimes occur after MMR vaccination.
- More serious reactions happen rarely. These can include seizures (often associated with fever) or temporary low platelet count that can cause unusual bleeding or bruising.
- In people with serious immune system problems, this vaccine may cause an infection that may be life-threatening. People with serious immune system problems should not get MMR vaccine.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) is a federal program that was created to compensate people who may have been injured by certain vaccines. Claims regarding alleged injury or death due to vaccination have a time limit for filing, which may be as short as two years. Visit the VICP website at www.hrsa.gov/vaccinecompensation or call **1-800-338-2382** to learn about the program and about filing a claim.

7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
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Hepatitis A Vaccine:

What You Need to Know

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1. Why get vaccinated?

Hepatitis A vaccine can prevent **hepatitis A**.

Hepatitis A is a serious liver disease. It is usually spread through close, personal contact with an infected person or when a person unknowingly ingests the virus from objects, food, or drinks that are contaminated by small amounts of stool (poop) from an infected person.

Most adults with hepatitis A have symptoms, including fatigue, low appetite, stomach pain, nausea, and jaundice (yellow skin or eyes, dark urine, light-colored bowel movements). Most children less than 6 years of age do not have symptoms.

A person infected with hepatitis A can transmit the disease to other people even if he or she does not have any symptoms of the disease.

Most people who get hepatitis A feel sick for several weeks, but they usually recover completely and do not have lasting liver damage. In rare cases, hepatitis A can cause liver failure and death; this is more common in people older than 50 years and in people with other liver diseases.

Hepatitis A vaccine has made this disease much less common in the United States. However, outbreaks of hepatitis A among unvaccinated people still happen.

2. Hepatitis A vaccine

Children need 2 doses of hepatitis A vaccine:

- First dose: 12 through 23 months of age
- Second dose: at least 6 months after the first dose

Infants 6 through 11 months old traveling outside the United States when protection against hepatitis A is recommended should receive 1 dose of hepatitis A vaccine. These children should still get 2 additional doses at the recommended ages for long-lasting protection.

Older children and adolescents 2 through 18 years of age who were not vaccinated previously should be vaccinated.

Adults who were not vaccinated previously and want to be protected against hepatitis A can also get the vaccine.

Hepatitis A vaccine is also recommended for the following people:

- International travelers
- Men who have sexual contact with other men
- People who use injection or non-injection drugs
- People who have occupational risk for infection
- People who anticipate close contact with an international adoptee
- People experiencing homelessness
- People with HIV
- People with chronic liver disease

In addition, a person who has not previously received hepatitis A vaccine and who has direct contact with someone with hepatitis A should get hepatitis A vaccine as soon as possible and within 2 weeks after exposure.

Hepatitis A vaccine may be given at the same time as other vaccines.



3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of hepatitis A vaccine**, or has any **severe, life-threatening allergies**

In some cases, your health care provider may decide to postpone hepatitis A vaccination until a future visit.

Pregnant or breastfeeding people should be vaccinated if they are at risk for getting hepatitis A. Pregnancy or breastfeeding are not reasons to avoid hepatitis A vaccination.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting hepatitis A vaccine.

Your health care provider can give you more information.

4. Risks of a vaccine reaction

- Soreness or redness where the shot is given, fever, headache, tiredness, or loss of appetite can happen after hepatitis A vaccination.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

An allergic reaction could occur after the vaccinated person leaves the clinic. If you see signs of a severe allergic reaction (hives, swelling of the face and throat, difficulty breathing, a fast heartbeat, dizziness, or weakness), call **9-1-1** and get the person to the nearest hospital.

For other signs that concern you, call your health care provider.

Adverse reactions should be reported to the Vaccine Adverse Event Reporting System (VAERS). Your health care provider will usually file this report, or you can do it yourself. Visit the VAERS website at www.vaers.hhs.gov or call **1-800-822-7967**. *VAERS is only for reporting reactions, and VAERS staff members do not give medical advice.*

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7. How can I learn more?

- Ask your health care provider.
- Call your local or state health department.
- Visit the website of the Food and Drug Administration (FDA) for vaccine package inserts and additional information at www.fda.gov/vaccines-blood-biologics/vaccines.
- Contact the Centers for Disease Control and Prevention (CDC):
 - Call **1-800-232-4636 (1-800-CDC-INFO)** or
 - Visit CDC's website at www.cdc.gov/vaccines.



Varicella (Chickenpox) Vaccine: What You Need to Know

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1. Why get vaccinated?

Varicella vaccine can prevent varicella.

Varicella, also called “chickenpox,” causes an itchy rash that usually lasts about a week. It can also cause fever, tiredness, loss of appetite, and headache. It can lead to skin infections, pneumonia, inflammation of the blood vessels, swelling of the brain and/or spinal cord covering, and infections of the bloodstream, bone, or joints. Some people who get chickenpox get a painful rash called “shingles” (also known as herpes zoster) years later.

Chickenpox is usually mild, but it can be serious in infants under 12 months of age, adolescents, adults, pregnant people, and people with a weakened immune system. Some people get so sick that they need to be hospitalized. It doesn’t happen often, but people can die from chickenpox.

Most people who are vaccinated with 2 doses of varicella vaccine will be protected for life.

2. Varicella vaccine

Children need 2 doses of varicella vaccine, usually:

- First dose: age 12 through 15 months
- Second dose: age 4 through 6 years

Older children, adolescents, and adults also need 2 doses of varicella vaccine if they are not already immune to chickenpox.

Varicella vaccine may be given at the same time as other vaccines. Also, a child between 12 months and 12 years of age might receive varicella vaccine together with MMR (measles, mumps, and rubella) vaccine in a single shot, known as MMRV. Your health care provider can give you more information.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction after a previous dose of varicella vaccine**, or has any **severe, life-threatening allergies**
- Is **pregnant** or thinks they might be pregnant—pregnant people should not get varicella vaccine
- Has a **weakened immune system**, or has a **parent, brother, or sister with a history of hereditary or congenital immune system problems**
- Is **taking salicylates** (such as aspirin)
- Has recently **had a blood transfusion or received other blood products**
- Has **tuberculosis**
- Has **gotten any other vaccines in the past 4 weeks**

In some cases, your health care provider may decide to postpone varicella vaccination until a future visit.

People with minor illnesses, such as a cold, may be vaccinated. People who are moderately or severely ill should usually wait until they recover before getting varicella vaccine.

Your health care provider can give you more information.



4. Risks of a vaccine reaction

- Sore arm from the injection, redness or rash where the shot is given, or fever can happen after varicella vaccination.
- More serious reactions happen very rarely. These can include pneumonia, infection of the brain and/or spinal cord covering, or seizures that are often associated with fever.
- In people with serious immune system problems, this vaccine may cause an infection that may be life-threatening. People with serious immune system problems should not get varicella vaccine.

It is possible for a vaccinated person to develop a rash. If this happens, the varicella vaccine virus could be spread to an unprotected person. Anyone who gets a rash should stay away from infants and people with a weakened immune system until the rash goes away. Talk with your health care provider to learn more.

Some people who are vaccinated against chickenpox get shingles (herpes zoster) years later. This is much less common after vaccination than after chickenpox disease.

People sometimes faint after medical procedures, including vaccination. Tell your provider if you feel dizzy or have vision changes or ringing in the ears.

As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.

5. What if there is a serious problem?

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BRIGHT FUTURES HANDOUT ► PARENT

12 MONTH VISIT

Here are some suggestions from Bright Futures experts that may be of value to your family.

✓ HOW YOUR FAMILY IS DOING

- If you are worried about your living or food situation, reach out for help. Community agencies and programs such as WIC and SNAP can provide information and assistance.
- Don't smoke or use e-cigarettes. Keep your home and car smoke-free. Tobacco-free spaces keep children healthy.
- Don't use alcohol or drugs.
- Make sure everyone who cares for your child offers healthy foods, avoids sweets, provides time for active play, and uses the same rules for discipline that you do.
- Make sure the places your child stays are safe.
- Think about joining a toddler playgroup or taking a parenting class.
- Take time for yourself and your partner.
- Keep in contact with family and friends.

✓ FEEDING YOUR CHILD

- Offer healthy foods for meals and snacks. Give 3 meals and 2 to 3 snacks spaced evenly over the day.
- Avoid small, hard foods that can cause choking—popcorn, hot dogs, grapes, nuts, and hard, raw vegetables.
- Have your child eat with the rest of the family during mealtime.
- Encourage your child to feed herself.
- Use a small plate and cup for eating and drinking.
- Be patient with your child as she learns to eat without help.
- Let your child decide what and how much to eat. End her meal when she stops eating.
- Make sure caregivers follow the same ideas and routines for meals that you do.

✓ ESTABLISHING ROUTINES

- Praise your child when he does what you ask him to do.
- Use short and simple rules for your child.
- Try not to hit, spank, or yell at your child.
- Use short time-outs when your child isn't following directions.
- Distract your child with something he likes when he starts to get upset.
- Play with and read to your child often.
- Your child should have at least one nap a day.
- Make the hour before bedtime loving and calm, with reading, singing, and a favorite toy.
- Avoid letting your child watch TV or play on a tablet or smartphone.
- Consider making a family media plan. It helps you make rules for media use and balance screen time with other activities, including exercise.

✓ FINDING A DENTIST

- Take your child for a first dental visit as soon as her first tooth erupts or by 12 months of age.
- Brush your child's teeth twice a day with a soft toothbrush. Use a small smear of fluoride toothpaste (no more than a grain of rice).
- If you are still using a bottle, offer only water.

Helpful Resources: Smoking Quit Line: 800-784-8669 | Family Media Use Plan: www.healthychildren.org/MediaUsePlan

Poison Help Line: 800-222-1222 | Information About Car Safety Seats: www.safercar.gov/parents | Toll-free Auto Safety Hotline: 888-327-4236

12 MONTH VISIT—PARENT

✓ SAFETY

- Make sure your child's car safety seat is rear facing until he reaches the highest weight or height allowed by the car safety seat's manufacturer. In most cases, this will be well past the second birthday.
- Never put your child in the front seat of a vehicle that has a passenger airbag. The back seat is safest.
- Place gates at the top and bottom of stairs. Install operable window guards on windows at the second story and higher. Operable means that, in an emergency, an adult can open the window.
- Keep furniture away from windows.
- Make sure TVs, furniture, and other heavy items are secure so your child can't pull them over.
- Keep your child within arm's reach when he is near or in water.
- Empty buckets, pools, and tubs when you are finished using them.
- Never leave young brothers or sisters in charge of your child.
- When you go out, put a hat on your child, have him wear sun protection clothing, and apply sunscreen with SPF of 15 or higher on his exposed skin. Limit time outside when the sun is strongest (11:00 am–3:00 pm).
- Keep your child away when your pet is eating. Be close by when he plays with your pet.
- Keep poisons, medicines, and cleaning supplies in locked cabinets and out of your child's sight and reach.
- Keep cords, latex balloons, plastic bags, and small objects, such as marbles and batteries, away from your child. Cover all electrical outlets.
- Put the Poison Help number into all phones, including cell phones. Call if you are worried your child has swallowed something harmful. Do not make your child vomit.

WHAT TO EXPECT AT YOUR CHILD'S 15 MONTH VISIT

We will talk about

- Supporting your child's speech and independence and making time for yourself
- Developing good bedtime routines
- Handling tantrums and discipline
- Caring for your child's teeth
- Keeping your child safe at home and in the car

Consistent with *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*, 4th Edition

For more information, go to <https://brightfutures.aap.org>.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



The information contained in this handout should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances. Original handout included as part of the *Bright Futures Tool and Resource Kit*, 2nd Edition.

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Dosage Charts

Milliliter is abbreviated as mL; 5mL equals one teaspoon (tsp)

Do not use household teaspoons, which can vary in size.

Aspirin should not be used in children to treat fever or pain.

483 East County Line Rd.
Hatboro, PA 19040

Keep all medications away from small children. In the event of an emergency please contact Poison Control: 1 (800) 222-1222

Acetaminophen (Tylenol)

2 MONTHS & OLDER ONLY

		Infant's Concentrated Drops 160 mg/ 5 mL	Children's Suspension Liquid 160 mg/ 5 mL	Children's Soft Chewable Tablets 80 mg each	Junior Strength Chewable Tablets 160 mg each
Weight	Age	Dropperful (Use dropper)	Teaspoon	Tablet	Tablet
6-11 lbs	2-3 Months	1.25 mL			
12-17 lbs	4-11 Months	2.5 mL	½ tsp (2.5mL)		
18-23 lbs	12-23 Months	3.75 mL	¾ tsp (3.75 mL)		
24-35 lbs	2-3 Years	5 mL	1 tsp (5 mL)	2	
36-47 lbs	4-5 Years		1 ½ tsp (7.5 mL)	3	
48-59 lbs	6-8 Years		2 tsp (10 mL)	4	2
60-71 lbs	9-10 Years		2 ½ tsp (12.5 mL)	5	2 ½
72-95 lbs	11 Years		3 tsp (15 mL)	6	3
96 lbs +	12 Years				4

Please note: One dose lasts 4 hours. No more than 5 doses in a 24 hour period. If the child's weight and age do not correspond to the same row on the chart, choose the dosage corresponding to your child's weight.

Ibuprofen (Motrin, Advil)

6 MONTHS & OLDER ONLY

		Infant's Concentrated Drops 50 mg/1.25 mL	Children's Suspension 100 mg/5 mL	Children's Soft Chewable Tablets 50 mg each	Junior Strength Chewable Tablets 100 mg each	Junior Strength Caplets 100 mg
Weight	Age	Dropperful (Use dropper)	Teaspoon	Tablet	Tablet	Caplet
12-17 lbs	6-11 Months	1.25 mL				
18-23 lbs	12-23 Months	1.875 mL				
24-35 lbs	2-3 Years	2.5 mL	1 tsp (5 mL)	2		
36-47 lbs	4-5 Years		1 ½ tsp (7.5 mL)	3		
48-59 lbs	9-10 Years		2 tsp (10 mL)	4	2	2
60-71 lbs	9-10 Years		2 ½ tsp (12.5 mL)	5	2 ½	2 ½
72-95 lbs	11 Years		3 tsp (15 mL)	6	3	3

Please Note: One dose lasts 6-8 hours. Not to be used in children under 6 months of age. No more than 5 doses in a 24 hour period. If the child's weight and age do not correspond to the same row on the chart, choose the dosage corresponding to your child's weight.