1. **Measles, Mumps, Rubella, and Varicella**

Measles, Mumps, Rubella, and Varicella (chickenpox) can be serious diseases:

**Measles:**
- Causes rash, cough, runny nose, eye irritation, fever.
- Can lead to ear infection, pneumonia, seizures, brain damage, and death.

**Mumps:**
- Causes fever, headache, swollen glands.
- Can lead to deafness, meningitis (infection of the brain and spinal cord covering), infection of the pancreas, painful swelling of the testicles or ovaries, and, rarely, death.

**Rubella (German Measles):**
- Causes rash and mild fever; and can cause arthritis (mostly in women).
- If a woman gets rubella while she is pregnant, she could have a miscarriage or her baby could be born with serious birth defects.

**Varicella (Chickenpox):**
- Causes rash, itching, fever, tiredness.
- Can lead to severe skin infection, scars, pneumonia, brain damage, or death.
- Can re-emerge years later as a painful rash called shingles.

These diseases can spread from person to person through the air. Varicella can also be spread through contact with fluid from chickenpox blisters.

Before vaccines, these diseases were very common in the United States.
2. **MMRV Vaccine**

MMRV vaccine may be given to children from 1 through 12 years of age to protect them from these four diseases.

Two doses of MMRV vaccine are recommended:

- The first dose at 12 through 15 months of age
- The second dose at 4 through 6 years of age

These are *recommended* ages. But children can get the second dose up through 12 years as long as it is at least 3 months after the first dose.

<table>
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<tr>
<th>Children may also get these vaccines as 2 separate shots: MMR (measles, mumps and rubella) and varicella vaccines.</th>
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<tbody>
<tr>
<td><strong>1 Shot (MMRV) or 2 Shots (MMR &amp; Varicella)?</strong></td>
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<td>• Both options give the same protection.</td>
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<td>• One less shot with MMRV.</td>
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<td>• Children who got the first dose as MMRV have had more fevers and fever-related seizures (about 1 in 1,250) than children who got the first dose as separate shots of MMR and varicella vaccines on the same day (about 1 in 2,500).</td>
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Your health-care provider can give you more information, including the Vaccine Information Statements for MMR and Varicella vaccines.

Anyone 13 or older who needs protection from these diseases should get MMR and varicella vaccines as separate shots.

MMRV may be given at the same time as other vaccines.

3. **Some children should not get MMRV vaccine or should wait.**

Children should not get MMRV vaccine if they:

- Have ever had a life-threatening allergic reaction to a previous dose of MMRV vaccine, or to either MMR or varicella vaccine
- Have ever had a life-threatening allergic reaction to any *component* of the vaccine, including gelatin or the antibiotic neomycin. Tell the doctor if your child has any severe allergies.
- Have HIV/AIDS, or another disease that affects the immune system
- Are being treated with drugs that affect the immune system, including high doses of oral steroids for 2 weeks or longer
- Have any kind of cancer
- Are being treated for cancer with radiation or drugs
Check with your doctor if the child:
- Has a history of seizures, or has a parent, brother or sister with a history of seizures
- Has a parent, brother or sister with a history of immune system problems
- Has ever had a low platelet count, or another blood disorder
- Recently had a transfusion or received other blood products
- Might be pregnant

Children who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting MMRV vaccine. Children who are only mildly ill may usually get the vaccine.

Ask your provider for more information.

4. **What are the risks from MMRV vaccine?**

A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of MMRV vaccine causing serious harm, or death, is extremely small.

Getting MMRV vaccine is much safer than getting measles, mumps, rubella, or chickenpox.

Most children who get MMRV vaccine do not have any problems with it.

**Mild Problems:**
- Fever (about 1 child out of 5)
- Mild rash (about 1 child out of 20)
- Swelling of glands in the cheeks or neck (rare)

If these problems happen, it is usually within 5-12 days after the first dose. They happen less often after the second dose.

**Moderate Problems:**
- Seizure caused by fever (about 1 child in 1,250 who get MMRV), usually 5-12 days after the first dose. *They happen less often when MMR and varicella vaccines are given at the same visit as separate injections (about 1 child in 2,500 who get these two vaccines), and rarely after a 2nd dose of MMRV.*
- Temporary low platelet count, which can cause a bleeding disorder (about 1 child out of 40,000)

**Severe Problems (Very Rare):**
Several severe problems have been reported following MMR vaccine, and might also happen after MMRV. These include severe allergic reactions (fewer than 4 per million), and problems such as:
- Deafness
- Long-term seizures, coma, lowered consciousness
• Permanent brain damage

Because these problems occur so rarely, we can’t be sure whether they are caused by the vaccine or not.

5. What if there is a severe reaction?

What should I look for?
Any unusual condition, such as a high fever or behavior changes. Signs of a severe allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

What should I do?
• Call a doctor, or get the person to a doctor right away.
• Tell the doctor what happened, the date and time it happened, and when the vaccination was given.
• Ask your provider to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form. Or you can file this report through the VAERS website at www.vaers.hhs.gov, or by calling 1-800-822-7967.

VAERS does not provide medical advice.

6. The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) was created in 1986. Persons who believe they may have been injured by a vaccine may file a claim with VICP by calling 1-800-338-2382 or visiting their website at www.hrsa.gov/vaccinecompensation.

7. How can I learn more?

• Ask your provider. They can give you the vaccine package insert or suggest other sources of information.
• Call your local or state health department.
• Contact the Centers for Disease Control and Prevention (CDC):
  o Call 1-800-232-4636 (1-800-CDC-INFO)
  o Visit CDC’s website at www.cdc.gov/vaccines