

## Mumps Questions

Below is the MMWR table. The entire May 22, 1998 / Vol. 47 / No. RR-8 Measles, Mumps, and Rubella —Vaccine Use and Strategies for Elimination of Measles, Rubella, and Congenital Rubella Syndrome and Control of Mumps: Recommendations of the Advisory Committee on Immunization Practices (ACIP) can be found at <http://www.cdc.gov/mmwr/PDF/rr/rr4708.pdf>.

TABLE 1. Acceptable presumptive evidence of immunity to measles, rubella, and mumps

	Routine	Persons who work in health-care facilities*	International travelers	Students at post-high school educational institutions
Measles	(1) documentation of adequate vaccination†: - preschool-aged children and adults not at high risk: 1 dose - school-aged children (grades K-12): 2 doses‡, or (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed measles	(1) documented administration of 2 doses of live measles virus vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed measles	(1) documented administration of 2 doses of live measles virus vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed measles	(1) documented administration of 2 doses of live measles virus vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed measles
Rubella	(1) documented administration of one dose of live rubella virus, vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957 (except women of childbearing age who could become pregnant††)	(1) documented administration of one dose of live rubella virus, vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957 (except women of childbearing age who could become pregnant††)	(1) documented administration of one dose of live rubella virus, vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957 (except women of childbearing age who could become pregnant††)	(1) documented administration of one dose of live rubella virus, vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957 (except women of childbearing age who could become pregnant††)
Mumps	(1) documented administration of one dose of live mumps virus vaccine†, or (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed mumps	(1) documented administration of one dose of live mumps virus vaccine† (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed mumps	(1) documented administration of one dose of live mumps virus vaccine† (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed mumps	(1) documented administration of one dose of live mumps virus vaccine† (2) laboratory evidence of immunity, or (3) born before 1957, or (4) documentation of physician-diagnosed mumps

\* Health-care workers include all persons (i.e., medical or nonmedical, paid or volunteer, full- or part-time, student or nonstudent, with or without patient-care responsibilities) who work facilities that provide health care to patients (i.e., inpatient and outpatient, private and public). Facilities that provide care exclusively for elderly patients who are at minimal risk for measles and rubella and complications of these diseases are a possible exception.

† The first dose should be administered on or after the first birthday; the second dose of measles-containing vaccine should be administered no earlier than one month (i.e., minimum of 28 days) after the first dose. Combined measles-mumps-rubella (MMR) vaccine generally should be used whenever any of its component vaccines is indicated.

‡ May vary depending on current state or local requirements.

§ Health-care facilities should consider recommending a dose of MMR vaccine for unvaccinated workers born before 1957 who are at risk for occupational exposure to measles and who do not have a history of measles disease or laboratory evidence of measles immunity.

\*\* Children aged 6–11 months should receive a dose of monovalent measles vaccine (or MMR, if monovalent vaccine is not available) before departure. Children who receive a dose of measles-containing vaccine before their first birthday should be revaccinated with two doses of MMR vaccine, the first of which should be administered when the child is aged 12–15 months (12 months if the child remains in a high-risk area) and the second at least 28 days later.

†† Women of childbearing age are adolescent girls and premenopausal adult women. Because rubella can occur in some persons born before 1957 and because congenital rubella and congenital rubella syndrome can occur in the offspring of women infected with rubella virus during pregnancy, birth before 1957 is not acceptable evidence of rubella immunity for women who could become pregnant.

Thanks to Deb Rivera RN COHN, Occupational Health Nurse from Children's Mercy Hospitals & Clinics, Kansas City, MO sharing the information with us.

Below is an e-mail from one of our local Occupational Health offices received from Dr. Atkinson of the CDC. Thanks to Truman Medical Center, Kansas City, Missouri for sharing!!

I have provided comments below. Some of these issues are addressed in our vaccine recommendations. Some you will need to consider as "expert opinion" because I have discussed all of these questions before with our various subject matter experts at the National Immunization Program.

The MMR ACIP statement can be found at <http://www.cdc.gov/mmwr/PDF/rr/rr4708.pdf>  
Varicella ACIP statements can be found at <http://www.cdc.gov/mmwr/PDF/rr/rr4511.pdf> and <http://www.cdc.gov/mmwr/PDF/rr/rr4806.pdf>  
The most current recommendations on hepatitis B vaccine and HCPs is <http://www.cdc.gov/mmwr/PDF/rr/rr5011.pdf>. A new document concerning hepatitis B vaccine in adults and HCPs is currently being developed.

William L. Atkinson, MD, MPH  
National Immunization Program  
Centers for Disease Control and Prevention

---

#### RUBELLA

1. If an employee is not immune to Rubella they should not work in high-risk areas. What would you consider the high-risk areas?

The risk of rubella is to a pregnant woman, particularly in the first trimester. If you have a rubella non-immune employee they should not work in an environment where, if the employee were to develop rubella, he or she could expose a pregnant woman. This seems most likely in an ob/prenatal clinic environment. In reality, an employee with rubella could have direct contact with a pregnant patient (or other employee) virtually anywhere in a medical setting. I see no practical way to completely eliminate the potential for such an exposure except by keeping the susceptible employee completely out of the medical setting.

2. If an employee has received two Rubella vaccines or has a positive history of Rubella disease. The titre is negative-are they considered immune or not?

Discussed in the MMR ACIP statement. The ACIP definition of rubella immunity is ONE dose on or after the first birthday. We do not recommend more than two MMR doses for anyone. Serology can be false negative. I suggest you accept written documentation of one or more doses of rubella vaccine as de facto evidence of immunity WITHOUT testing. I would consider a person with two documented doses of MMR immune regardless of the results of serologic testing. A history of rubella disease is worthless and should NOT be accepted as evidence of immunity. This is also discussed in the ACIP statement.

3. An employee twice has an equivocal titres, Immune or not? Should a one dose booster be given? What if two doses have already been received?  
Is one equivocal result enough or do we need to repeat the test in 10-14 days?

We recommend that "equivocal" serology be treated as negative. My answer to the previous question applies here as well. If a person can document age-appropriate MMR vaccination serologic testing is not necessary. If the person has had only one dose of MMR I would give a second and STOP TESTING.

4. What is acceptable documentation from an employee of their Rubella status?

Addressed in the MMR ACIP statement (table 1)

5. After receiving MMR vaccine, should an employee be furloughed from high-risk areas? If yes, how long?

MMR vaccine virus infection is not transmittable. Furlough is not necessary. This is addressed in the MMR ACIP statement.

## VARICELLA

1. An employee is not immune and they decline the vaccine, should they be removed from working in high-risk areas?

It would be very difficult to define a "high risk area" in a general medical setting. A susceptible employee could be exposed to a person incubating chickenpox at any time. An employee with chickenpox could expose a susceptible patient at almost any time in a medical setting. I suppose if I had an employee who was susceptible I would try to keep them away from areas known to house immunosuppressed patients, particularly chemo and post-transplant.

2. After receiving Varicella vaccine, should they be furloughed from high-risk areas? If yes, how long?

Transmission of varicella vaccine virus, to my knowledge, has only been documented when the vaccinated person develops a rash (about 2 weeks postvaccination). Susceptible vaccinated HCPs should be asked to report to employee health if they develop a rash in the 2 weeks following vaccination. Those with a rash should not be assigned to places most likely to have susceptible immunosuppressed people (noted above).

## HEPATITIS B IMMUNITY STATUS

This would be especially important to us in a blood and body fluid exposure situation.

1. Should titres be drawn on all employees who may have this exposure to have this information available before an exposure may occur?

Hepatitis B post-vaccination serologic testing was first recommended in 1997. We did not then, nor do we now recommend a "catch-up" serologic testing program for people vaccinated before 1997. Persons for whom you do not have documentation of immunity to HBV can be tested at the time of an exposure.