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Avoiding the measles

Since the beginning of May, there have been over a dozen confirmed cases of the measles and two cases of rubella reported in the Boston area. In addition, the federal Centers for Disease Control has confirmed more than 4,000 cases of mumps in 12 Midwestern states this spring.

What are these diseases? How dangerous are they? What should be done to protect your family?

Measles is the most serious of the illnesses, presenting with high fever, cough, runny nose, and red runny eyes, followed in a few days by a red bumpy rash. The vast majority of those infected recover without complications, but encephalitis occurs in one of every 1,000 cases and can lead to severe brain damage or death.

Rubella (German measles) is a mild disease recognizable by a low-grade fever, pale pink bumpy rash, swollen glands and temporary joint pain. Rubella patients recover quickly without complications.

Mumps is also a generally mild, presenting most commonly with fever and swollen salivary glands. Significant numbers of patients experience bad headaches due to mild central nervous system infections. Males frequently suffer from orchitis (inflammation of the testes), which is frequently misconstrued as a cause of sterility. Mumps cause discomfort, but patients recover quickly without complications.

The vaccine used to prevent these diseases, now known as MMR, has been so effective that two generations of Americans have had no personal knowledge or experience with measles, mumps or rubella. Prior to mid-1970's, almost every child in America was destined to contract all three of these illnesses.

Questions have been raised over the last 10 years regarding the safety and value of vaccines in general, MMR in particular. After intensive scientific review, the medical community has confirmed that these vaccines are safe, but parents have continued to ask whether vaccination is worth any amount of risk for diseases so rare that a whole generation of physicians has never seen them.

Vaccination is used to prevent rubella, even though mild, because women infected during the first month of pregnancy—often before becoming aware they are pregnant—have an 85 percent chance of delivering an infant with severe birth defects, such as blindness, major cardiac difficulties and mental retardation. In addition, individuals with HIV/AIDS or other immunological problems can become ill or more severely infected if exposed to measles, mumps or rubella.

It is legitimate to ask why, if the vaccines work, are there so many reported outbreaks? Have the viruses that cause the illnesses changed or is the vaccine ineffective? During the last outbreak, between 1989 and 1991, we learned that one dose of vaccine provides protection in only 65 percent of cases, but a second booster does increase effectiveness to 88 percent. This means that at least 10 percent of patients vaccinated still remain at the risk for these diseases.

Universal vaccination is critically important if we are to provide protection and prevent serious illness. We encounter the viruses that cause these diseases regularly in our day-to-day activities. Those in the community who have been vaccinated but who remain at risk are frequently unaware of the danger, because antibody responses to determine immunity are rarely checked. These individuals depend on the immune status of their family, friends, co-workers and community at large for protection. Those who avoid personal immunization put us all at risk.

Individuals born before 1957 are at very low risk, because most had the disease. Any individuals born outside of the United States should have a blood test to check immunity, or more simply, an MMR vaccine can be given. Anyone born after 1957 should have received two doses of vaccine, regardless of place of birth. If they haven't received both doses, they should get a booster now. Any child older than 12 months should get their first dose of MMR as soon as possible with a second dose provided at 4 to 6 years of age. The schedule changes with exposure to one of these illnesses or in epidemic conditions. In this situation, the second dose is given four weeks after the first dose and within 72 hours of exposure when possible.

Parents who would like to know more about measles or vaccinations should contact their pediatrician or visit the American Academy of Pediatrics Web site at www.aap.org

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