



## News and Public Information

### **Rubella Fact Sheet**

#### **What is Rubella?**

Rubella, normally a mild childhood disease, occurs worldwide. Infection of a mother in early pregnancy can cause fetal death or congenital rubella syndrome (CRS), with multiple birth defects such as cataract, hearing loss, heart problems and mental retardation. More than 110,000 cases of congenital rubella syndrome are estimated to occur each year in developing countries. Caring for children with the syndrome is difficult and costly because of the permanent disabilities caused by this condition.

#### **How can it be prevented?**

Rubella vaccination will prevent the occurrence of congenital rubella syndrome. Immunizing adolescent girls and women of childbearing age will help prevent the syndrome. Rubella can be eliminated in the Americas through universal vaccination of infants and young children, surveillance, and assuring immunity in women of childbearing age. When combined with measles vaccine, the benefits of rubella vaccination far outweigh the costs.

#### **What is the public health impact?**

The highest risk of CRS is found in countries with high susceptibility rates among women of childbearing age. Reliable statistics on CRS are not common in developing countries. Large epidemics can lead to very high levels of morbidity. The rubella epidemic in the United States in 1964–1965 resulted in an estimated 12.5 million cases of rubella, over 2,000 cases of encephalitis, more than 20,000 cases of CRS, 11,000 cases of deafness, 3,580 blind children and 1,800 children with mental retardation.

#### **How is Rubella transmitted?**

The rubella virus is transmitted by the respiratory route. The incubation period ranges from 12 to 23 days, with an average of 18 days. In pregnant women the virus infects the placenta and the developing fetus. Humans are the only known host.

#### **What causes congenital rubella infection?**

Congenital rubella infection and congenital rubella syndrome are caused by infection in early pregnancy. During the first 10 weeks of gestation, rubella infection may result in multiple fetal defects in up to 90 percent of cases, and often results in miscarriage or stillbirth. Infants with CRS who survive the neonatal period may face serious developmental disabilities and have an increased risk for developmental delay, including autism, type I diabetes mellitus and thyroiditis.



### **What rubella vaccines are available and when should they be given?**

Several rubella vaccines are available, either as single vaccines or combined with measles vaccine (MR) or measles and mumps vaccine (MMR). Rubella vaccine is usually given between nine and 15 months of age, depending on country programs. It can also be administered to older children, adolescents, students, childcare personnel, health care workers, military personnel and adult men in contact with women of childbearing age. Rubella vaccination should be avoided in pregnancy.

### **What is the justification for rubella vaccination programs?**

The main purpose of rubella vaccination is to prevent congenital rubella syndrome, an important cause of deafness, blindness and mental retardation in children. Rubella vaccination is already included in most national immunization programs in the majority of countries and territories of the world. The vaccines are highly protective and without significant adverse effects. Caring for CRS cases is costly in all countries. All cost-benefit studies of rubella vaccination, in developing and developed countries, have demonstrated that the benefits far outweigh the costs. Rubella vaccination is economically justified, particularly when combined with measles vaccine. Large-scale rubella vaccination during the last decade has drastically reduced or practically eliminated rubella and CRS in many countries.

### **What are health authorities doing about rubella?**

Ministers of health throughout the Americas are considering a plan to eliminate rubella and congenital rubella syndrome (CRS) from their countries by the year 2010, and the Pan American Health Organization is developing a regional plan of action to mobilize resources in support of the elimination of rubella/CRS by the year 2010. In fact, some countries in the English-speaking Caribbean and Central and South America have already controlled or are working successfully towards eliminating rubella.

### **What partners are involved in the rubella elimination effort?**

The Pan American Health Organization, the Centers for Disease Control and Prevention, the March of Dimes, USAID, CIDA, and the Albert B. Sabin Vaccine Institute are all working together to eliminate rubella and congenital rubella syndrome from the Americas.