

receive the MMRV vaccine because of a lack of evidence of its safety in this population. The risks and benefits of administering the MMRV vaccine should be fully explained to the parent or caregiver; the risk for a febrile seizure at 5 to 12 days in children 12 to 23 months old remains relatively low and should be weighed with the benefit of one fewer intramuscular injection ([American Academy of Pediatrics, 2015](#)). The [American Academy of Pediatrics \(2015\)](#) recommends that either the MMR or MMRV vaccine be given as the first dose of MMRV vaccine at 12 through 47 months old; for children 48 months old and older, the first dose with MMRV is recommended to decrease the number of injections; for the second dose at any age (15 months through 12 years old), MMRV is also recommended for the same reason.

Vitamin A supplementation has been effective in decreasing the morbidity and mortality associated with measles in developing countries (see also [Table 6-1](#)).

Mumps

Mumps virus vaccine is recommended for children at 12 to 15 months old and is typically given in combination with measles and rubella. It should not be administered to infants younger than 12 months old because persisting maternal antibodies can interfere with the immune response. Because of continued occurrence of the disease, especially in children 10 to 19 years old, mumps immunization is recommended for all individuals born after 1957 who may be susceptible to mumps (i.e., those who have no history of having had the disease or vaccine and who have no laboratory evidence of immunity).

Rubella

Rubella is a relatively mild infection in children, but in a pregnant woman the actual infection presents serious risks to the developing fetus. Therefore, the aim of rubella immunization is actually protection of the unborn child rather than the recipient of the immunization.

Rubella immunization is recommended for all children at 12 to 15 months old and at the age of school entry or 4 to 6 years old or sooner, according to the routine recommendations for the MMRV vaccine ([American Academy of Pediatrics, 2015](#)). Increased