Measles vaccination

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1 Measles cases are increasing in Canada

By March 2024, 40 cases had been reported (12 in 2023).[1] One measles case can cause infection in 90% of exposed, unvaccinated people.[2] Complications of infection occur in 30% of cases, most frequently in children younger than 5 years; complications include otitis media, pneumonia, encephalitis, loss of protective immunity to other pathogens, neonatal infection, and stillbirth.[3]

2 The measles, mumps, and rubella (MMR) vaccine is effective and safe

Two doses of the live, attenuated MMR vaccine confer more than 99% long-term protection.[4] Adverse effects are typically mild, involving fever, rash and, rarely, febrile seizures.[4] The vaccine is contraindicated for patients who are immunocompromised or pregnant, owing to risk of disseminated measles and fetal infection, respectively.[4]

3 Vaccination is recommended in childhood

The routine MMR immunization series consists of 2 doses: the first is administered at age 12–15 months, and the second after 18 months, generally given at school entry (age 4–6 yr).

4 Before travel, during outbreaks, or with known exposure, susceptible people can be immunized outside of routine schedules

The first dose may be given as early as 6 months of age. However, if given before 12 months, 2 additional doses are recommended.[4] The second dose can also be administered earlier, at 18 months or beyond, with an interval of at least 28 days between doses. Immunization should precede travel by at least 2 weeks. For susceptible people older than 6 months, the vaccine can be offered within 72 hours of exposure to a person with measles.[4]

5 For adults, the number of MMR doses depends on risk of potential exposure and history of immunization

Unless contraindicated, vaccination is preferred over serologic testing for protective measles antibodies if immune status is unknown.[4] If travelling outside of Canada or to a location experiencing an outbreak, those born before 1970 (who were not immunized and have presumed natural immunity), and those born between 1970 and 1996 (who received a single dose) can be given 1 dose. Military personnel, health care workers, and people with no immunization records should ensure they have received 2 doses of the vaccine.

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