

## 1. Vaccine indication

Measles vaccination is indicated for the active primary prevention of measles in persons not previously infected with the measles virus.

## 2. Rationale for vaccination

The primary objective of measles vaccination is the prevention of infection with the measles virus, thereby preventing measles-associated complications such as otitis media, pneumonia, encephalitis, subacute sclerosing panencephalitis, and death.

## 3. Type of vaccine

Live-attenuated viral vaccine.

## 4. Composition of the vaccine

Measles vaccine consists of live-attenuated Moraten strain of the measles virus prepared by passaging viral isolates in primary chick embryo culture cells. The vaccine is stored in lyophilized form at 2<sup>0</sup>C to 8<sup>0</sup>C. In the frozen state, it can be stored for longer periods. The vaccine should be protected from light at all times and should be reconstituted just before use only with the diluent supplied. The vaccine can be available as a monovalent; a bivalent in combination with mumps, MM, or rubella vaccines, MR; or as a trivalent in combination with mumps and rubella vaccines, MMR.

## 5. Immunogenicity of the vaccine

Following measles vaccination, the immune response is the same as in natural infection in 95% of vaccinees. Immune response to revaccination depends on the response of the individual following initial vaccination. Nonresponders to initial vaccination often generate primary immune response to revaccination with more elevated levels of antibodies than responders.

## 6. Efficacy and long-term protection

Measles vaccine is very efficacious and seroconversion following immunisation will provide lifelong protection for almost all vaccinees.

## 7. Candidates for vaccination

In South Africa, measles vaccine is given to babies at 9 and 18 months of age as part of the EPI-SA schedule. Asymptomatic HIV-positive infants should be vaccinated at 6 months of age, with an additional dose at 9 months.

In addition, the following persons at risk for measles infection should be vaccinated:

- unvaccinated children
- children in day-care centres and nurseries
- young adults and women of childbearing age who are not pregnant, and who have not previously had measles or been vaccinated
- people living in overcrowded conditions

## 8. Vaccination regimen and route of administration

Measles vaccine is administered subcutaneously to the anterolateral aspect of the thigh for infants, or the deltoid muscle for older children and young adults. Measles vaccine is given to a separate limb if administered simultaneously with other vaccines. In South Africa, measles vaccine is available as a monovalent through the EPI-SA. However, MMR can be available upon request from the private sector.

## 9. Side effects and special precautions

Reactions to measles vaccine are usually mild, although in rare events, cases of allergic reaction to the vaccine have been observed. In such cases, vaccination should be discontinued. Measles vaccine should not be given to persons with severe immune deficiency. Asymptomatic HIV positive persons can be vaccinated.

Common side-effects following measles vaccination include:

- Pain at the site of injection
- Fever in 5% to 15% of vaccinees between days 7 and 12 after vaccination and usually lasts for a day or two
- Rash in 5% of recipients starting 7 to 10 days after vaccination and lasting 1 - 3 days.

### Where to find us:

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