GLOBAL - NITAG - NETWORK

NITAG Resource Center

Downloaded on 24 November 2026

This PDF reflects the content available on the download date. Consult the **web version** for any updates.

Measles containing vaccines indicator

Safety of the intervention

Type, including severity, consequences and frequency of short- and long-term adverse events following vaccination

Adverse reactions following measles vaccination are generally mild and transient. Within 24 hours of vaccination, vaccine recipients may experience slight pain and tenderness at the site of injection, which usually resolves in 2–3 days. Approximately 7–12 days after vaccination, systemic reactions occur in about 5–15% of recipients including fever of >39 °C for 1–2 days. A transient rash occurs in about 2% of recipients. Adverse events, apart from anaphylactic reactions, are less likely to occur after second vaccination.1 Serious adverse events can also occur due to administration errors.

Rubella-containing vaccines have an excellent safety profile. In a systematic review of 40 RCTs with 34 332 participants, only 140 serious adverse events were reported with no deaths or permanent disabilities considered attributable to the vaccine. Serious events were extremely rare and included febrile seizures (25 cases; 0.07%), idiopathic thrombocytopenic purpura (4 cases; 0.01%) and isolated reports of other neurological or inflammatory conditions.2

Adverse events to mumps vaccine are generally rare and mild, however, they are usually co-administered with MMR and therefore difficult to attribute specific mumps components. Aseptic meningitis risk is strain-specific and has been associated with Urabe and Leningrad–Zagreb vaccines (aRR: 6.4; 95% CI: 0.3–124.4).3

Please consult the relevant position papers for intervention safety for varicella.

Sources

1.

World Health Organization. Measles vaccine: WHO position paper – April 2017. Wkly Epidemiol Rec. 2017; 92(17): 205-228 (https://iris.who.int/server/api/core/bitstreams/3eb838f7-724d-41d4-9a66-47ed008deb48/content, accessed 7 August 2026).

2.

van den Boogaard J, de Gier B, de Oliveira Bressane Lima P, Desai S, de Melker HE, Hahné SJM, et al. Immunogenicity, duration of protection, effectiveness and safety of rubella-containing vaccines: a systematic literature review and meta-analysis. Vaccine. 2021;39(6):889–900. doi:10.1016/j.vaccine.2020.12.079.

3.

World Health Organization. Strategic Advisory Group of Experts on Immunization (SAGE) Yellow Book: September 2023. Geneva: World Health Organization; 2023. (https://terrance.who.int/mediacentre/data/sage/SAGE_eYB_Sept2023.pdf, accessed 7 August 2026).