

Changes to National Immunisation Advisory Committee recommendations for the Prevention of Measles following probable or confirmed exposure to a case of measles (December 1, 2018)

There has been a resurgence of measles in Europe and other regions in recent years. A number of outbreaks have occurred in Ireland in 2018. The National Immunisation Advisory Committee (NIAC) has therefore reviewed and updated its recommendations for measles prevention.

Changes include:

1. Updated recommendations for post-exposure prophylaxis for non-household contacts, aged 6 to <9 months of age, of a case of measles
2. Changes to recommendations regarding Human Normal Immunoglobulin (HNIG) products, dose and administration
3. Revised recommendations for travellers to countries or regions where measles is endemic or where outbreaks are occurring

1. Recommendation for post-exposure measles prophylaxis of non-household contacts aged 6 to <9 months

This includes those who, *within the preceding 6 days*, may have been exposed to measles in an Emergency Department (ED) or Out Patient Department (OPD) setting where the intensity of such exposure cannot be accurately judged.

- i. If exposure occurred ***within the preceding 72 hours***, give MMR vaccine.
- ii. If exposure occurred ***between 73-144 hours previously*** (i.e. from day 4 – 6 post exposure) and MMR vaccine has not been given within 72 hours of exposure, give HNIG if practicable. Those who have received HNIG should wait at least 6 months before receiving subsequent MMR vaccination.

2. HNIG dose and administration

Note: In some circumstances, advice from NIAC may differ from that in the Summary of Product Characteristics (SmPC). When this occurs, recommendations based on current expert advice from NIAC should be followed.

It is important to administer immunoglobulin to vulnerable contacts as soon as possible after exposure and ideally within the first 72 hours. There is no consistent evidence regarding the efficacy of SC immunoglobulin received 4-6 days after exposure to a case of measles, and its use is primarily to reduce the severity of disease in vulnerable contacts.

Two HNIG products are authorised and available in Ireland for subcutaneous (SC) administration - **Cuvitru**[®] 20% w/v and **Hizentra**[®] 20%w/v. **Subgam**[®] 16%w/v, which is available through the cold chain, is authorised by the Medicines and Healthcare products Regulatory Agency (MHRA UK). Peak serum IgG levels are reached by Hizentra[®] in approx. 2 days, and by Cuvitru[®] in 3 days. Following subcutaneous administration of Subgam[®], peak serum levels are achieved after approximately 4 to 5 days.

Immunocompromised contacts should receive an intravenous immunoglobulin (IVIG) preparation.

Dose recommendations for use of these products as post exposure prophylaxis against measles are not well established. Based on available evidence the following doses are recommended: *Note doses of Subgam® are now higher than previously recommended.*

Infant Weight	16% HNIG (Subgam®)	20% HNIG*(Cuvitru®, Hizentra®)
3-<4kg	3.5ml	3ml
4-<5kg	5ml	3.5ml
5-<6kg	5.5ml	4.5ml
6-<7kg	6ml	5ml
7-<8kg	7ml	6ml
8-<9kg	8ml	6.5ml
9-<10kg	9ml	7.5ml
10-<11kg	9.5ml	8ml
11-<12kg	11ml	9ml
12-<14	12ml	10ml

*When available, either Cuvitru® or Hizentra® are recommended, because of the smaller volume required, and the earlier peak serum levels achieved.

These preparations should be given by subcutaneous infusion, at an initial rate of not more than 10ml/hour/infusion site. More than one pump can be used simultaneously, to shorten the infusion time. If tolerated, the rate can be increased at intervals of ≥ 10 minutes to a maximum of 20ml/hour/ site. The infusion site can be changed every 5 to 10 ml. Please refer to the SmPC and the Product Information Leaflet (PIL) for details on administration and possible adverse effects.

3. Pre-travel measles vaccination for those travelling to countries or regions where measles is endemic or where outbreaks are occurring:

- i. **Infants 6 months to ≤ 11 months of age** should receive one dose of MMR vaccine.

A dose given ≤ 11 months of age does not replace the dose recommended at 12 months of age. If a dose of MMR is given before the first birthday, either because of travel to an endemic country or because of a local outbreak, two further doses should be given ≥ 12 months of age (at least 28 days after the first dose) and 4 to 5 years of age.

ii. Children 12 months of age and older

- a) *If unvaccinated* should receive two doses of MMR vaccine separated by ≥ 28 days. To ensure protection, the second dose should be given ≥ 2 weeks prior to travel.
- b) *If received one dose of MMR vaccine* should receive a second dose ≥ 28 days later and ideally ≥ 2 weeks prior to travel.
- c) *if received two doses of MMR vaccine <3 months apart and the child was <18 months of age,* the routine 4-5 year dose (i.e. a third dose) should be given in order to ensure full protection

- ii. **Teenagers and adults without evidence of immunity to measles** should get two doses of MMR vaccine separated by ≥ 28 days.

Acceptable presumptive evidence of immunity against measles includes at least one of the following:

- Written documentation of adequate vaccination
- Laboratory evidence of immunity
- Laboratory confirmations of measles infection
- Birth in Ireland before 1978. Most adults born in Ireland before 1978 are likely to have had measles infection. If there is doubt about measles status and if vaccination history cannot be validated, assume susceptibility and give MMR vaccine unless contraindicated.

The following recommendations remain unchanged:

- a. Exposed infants aged <6 months** should receive a single dose of HNIG. Ideally this should be administered within 72 hours of exposure; however, it may be administered up to 6 days post exposure. For dose recommendations see above.
- b. Exposed infants aged 6 - <9 months who had a household or household type exposure** should receive a single dose of HNIG. Ideally this should be administered within 72 hours of exposure; however it may be administered up to 6 days post exposure. For dose recommendations see above.
- c. Exposed infants aged 9 months or older (household or non-household exposure)** should receive MMR vaccine within 72 hours of exposure; limited evidence suggests that this may prevent disease or reduce its severity. If MMR vaccine is not administered within 72 hours, it should still be offered at any interval following exposure in order to offer protection from future exposures.

Reference:

Public Health England (2017). Guidelines on Post-Exposure Prophylaxis for measles August 2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/637003/Guidance_for_measles_post-exposure_prophylaxis.pdf