

**OREGON STATE PUBLIC HEALTH DIVISION, DHS  
IMMUNIZATION PROGRAM**

**IMMUNE GLOBULIN  
FOR THE PROPHYLAXIS OF MEASLES**

Revisions as of 7/06

- Addition of the ventrogluteal hip site as a choice for Intramuscular injections of Immune Globulin (IG). Instructions for how to administer a ventrogluteal IM injection are attached to the Recommended Sites and Routes for Vaccine Administration Order.

**I. ORDER:**

1. Screen for contraindications.
2. Provide product information, answering questions.
3. Obtain a signed Vaccine Administration Record (VAR)
4. Give immune globulin (IG) intramuscularly (IM) to children and adults with a 1 to 2 inch needle, depending on recipient's weight.
5. Select a large muscle mass that can support the administration of a large volume of IG.
  - For children <3 years of age, administer IG into the vastus lateralis (outer thigh) muscle with a 7/8-to-1-inch needle.
  - For persons ≥3 years of age, administer IG into the ventrogluteal or dorsogluteal muscle with a 1-2 inch needle.
  - For adults with sufficient deltoid muscle mass, the deltoid muscle may be used.
6. Use formulation and dosage according to recipient's weight.
7. Do not administer more than 3 ml of IG per injection site in children or more than 5 ml of IG per injection site in adults.
8. IG can be administered simultaneously with, or at any interval before or after, any inactivated vaccine.
9. Before simultaneous administration with live vaccines check the table in Appendix A-18 of the 9<sup>th</sup> edition "Pink Book" for suggested intervals between IG and measles containing vaccine.

**Note:** Measles vaccine is the biologic of choice if given within 72 hours of exposure. For persons in whom vaccine is contraindicated or more than 72 hours passed, and they are still within 6 days of exposure, immune globulin should be used.

---

Signature

Health Officer or Medical Provider

Date

July 2006

**II. IMMUNE GLOBULIN DOSE SCHEDULE FOR MEASLES EXPOSURE<sup>1,2,3,4</sup>**

<u>Setting</u>	<u>Duration of Coverage</u>	<u>Dose</u>
Standard (immunocompetent)	1–2 months	0.25 ml/kg
Immunocompromised host	3–5 months	0.50 ml/kg

<sup>1</sup> IG should be administered within 6 days of exposure.  
<sup>2</sup> IG should only be administered to susceptible children and adults. Minimum age is 5 months for immune globulin; most infants will still have some protection from circulating maternal antibodies through their fifth month of life. The exception to this is infants younger than 5 months whose mothers develop measles, which indicates that the mother has little or no antibody against measles.  
<sup>3</sup> Immune globulin is indicated for household contacts of patients with measles, particularly contacts younger than 1 year of age, pregnant women, and immunocompromised people.  
<sup>4</sup> The maximum dose is 15 ml intramuscularly for both immunocompetent and immunocompromised persons. Do not administer more than 5 ml of IG per injection site in adults and no more than 3 ml per injection site in children.

Note: IG is not indicated for household contacts with a history of one dose of live measles-containing vaccine given at ≥ 1 year of age. The only exception to this is immunocompromised individuals, for whom IG would be indicated.

**III. CONTRAINDICATIONS:**

1. IG should not be given to people with immunoglobulin A (IgA) deficiency. Persons with IgA deficiencies have the potential for developing antibodies to IgA and therefore could experience an anaphylactic reaction when IG is administered
2. IG should not be administered to persons with severe thrombocytopenia or any coagulating disorder that would contraindicate intramuscular injections.
3. History of anaphylactic reaction to a previous dose of IG.

**IV. PRECAUTIONS:**

1. Pregnancy: It is unknown whether IG can cause fetal harm when administered to a pregnant woman or if it could affect reproduction.
2. Careful administration in persons reporting a history of systemic allergic reaction following the administration of IG.

**V. SIDE EFFECTS AND ADVERSE REACTIONS:**

**Event**

Tenderness, pain, or soreness at injection site.  
Usually resolves within 24 hours.

**Frequency**

Common

**VI. OTHER CONSIDERATIONS:**

- A. IG may interfere with the response to live, attenuated vaccines (e.g. MMR, varicella) when the vaccines are administered individually or as a combined vaccine. Delay administration of live attenuated vaccines for 5 months after the administration of IG.
- B. Ideally, IG should not be administered within 2 weeks following the administration of MMR or for 3 weeks following varicella vaccine. Should this occur, the individual should be revaccinated, but no sooner than 5 months after IG administration.
- C. For individuals currently on immune globulin intravenous therapy (IGIV), the dose of 100 to 400 mg/kg should be sufficient prophylaxis for exposures occurring in the three weeks following treatment.
- D. In the event of a community outbreak, the age at which the first measles vaccine is given can be dropped to as low as 6 months. These infants, however, will still need a dose of MMR at or after 12 months of age and a third dose at school entry, 4 to 6 years of age.

## VII. REFERENCES:

1. Immune globulin measles In: Epidemiology and Prevention of Vaccine Preventable Diseases (“Pink Book”). Atkinson W, Hamborsky J, Wolfe S, eds. 9<sup>th</sup> ed. Washington, DC: Public Health Foundation, 2006: 138-39.
2. American Academy of Pediatrics. Measles. In: Pickering LK, Baker CJ, Long SS, McMillan JA, eds. *Red Book: 2006 Report of the Committee on Infectious Diseases*. 27<sup>th</sup> ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006: 441-52.
3. CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization practices (ACIP) and the American Academy of Family Physicians (AAFP). MMWR 2002; 51 (RR-2): 1-35.
4. Greenway K. Using the ventrogluteal site for intramuscular injection. Nurs Stand 2004;18: 39-42.
5. Nicholl LH & Hesby A. Intramuscular injection: an integrative research review and guideline for evidence-based practice. Appl Nurs Res 2002;15:149-62
6. Package inserts.

For more information or to clarify any part of the above order, consult with your health officer or contact the Oregon State Public Health Division, DHS Immunization Program at (971) 673-0300.

Visit our website at <http://oregon.gov/dhs/ph/imm/index.shtml>.  
To request this material in an alternate format (e.g., braille),  
please call (971) 673-0300.