



Administration of Intramuscular Immune Globulin for Hepatitis A Postexposure Prophylaxis - April 2021

Due to age or underlying conditions, some persons whose last exposure to hepatitis A virus was in the prior 14 days may be recommended to receive intramuscular (IM) immune globulin (IG), in addition to hepatitis A vaccine, to provide passive protection against hepatitis A infection. An immunocompetent person who has received at least 1 dose of hepatitis A vaccine at least 2-4 weeks prior to their first exposure does not need to receive IMIG for hepatitis A postexposure prophylaxis.

For more information on which exposed persons should receive IMIG, see the [CDPH Hepatitis A PEP Recommendations](#).

General IMIG information

1. Administer IMIG within 14 days after the last exposure to hepatitis A.
2. The only IMIG product in the U.S. is GamaSTAN® S/D. It can be ordered 24/7 from FFF Enterprises at 800-843-7477.
3. GamaSTAN® S/D is preservative-free and latex-free.
4. IMIG and hepatitis A vaccine may be given at the same time in different anatomic sites.

Administration of IMIG

1. Screen patients for contraindications to IMIG. See Table 2 and Attachment 1.
2. Provide patients with IMIG product information and answer any questions. See Attachment 2.
3. Check the GamaSTAN® S/D package insert prior to administration.
4. Dose of IMIG for hepatitis A postexposure prophylaxis is **0.1 mL/kg**.
5. IMIG should be administered intramuscularly preferably in the anterolateral aspects of the upper thigh (vastus lateralis is preferred). The deltoid muscle may be used for adults when there is sufficient muscle mass (Figure 1). See Table 1 for guidance on needle gauge, needle length, and injection site.
6. No more than 5 mL of IMIG should be administered per injection site in adults or large children/adolescents. Infants and small children should be given 1-3 mL per injection site. Please see this [guide on administering immunizations](#), including suggested volumes per injection site for adults and children.
7. Depending on weight, patients may need multiple injections, each at a different site.
8. Observe patients for an allergic reaction for 15 – 20 minutes after administering IMIG, if possible.
9. Although true allergic responses to IMIG are rare, have epinephrine available for treatment of acute allergic symptoms, should they occur. Please see the [GameSTAN S/D package insert](#) for more information.

Table 1. Appropriate anatomic site and needle length for intramuscular injections

Appropriate site and needle length depend on age, body mass, and volume.

Intramuscular (IM) Injection		
Use a 22-25 gauge needle. Choose the injection site and needle length that is appropriate to the person's age and body mass.		
Age	Needle Length	Injection Site
Newborns (1 st 28 days)	5/8" [†]	Anterolateral thigh muscle
Infants (1-12 mos)	1"	Anterolateral thigh muscle
Toddlers (1-2 years)	1-1 ¹ / ₄ "	Anterolateral thigh muscle [‡]
	5/8-1" [†]	Deltoid muscle of arm
Children (3-10 years)	5/8-1" [†]	Deltoid muscle of arm [‡]
	1-1 ¹ / ₄ "	Anterolateral thigh muscle
Adolescents and teens (11-18 years)	5/8-1" [†]	Deltoid muscle of arm [‡]
	1-1 ¹ / ₂ "	Anterolateral thigh muscle
Adults 19 years or older		
Female or male <130 lbs	5/8-1" [†]	Deltoid muscle of arm [§]
Female or male 130-152 lbs	1"	Deltoid muscle of arm [§]
Female 153-200 lbs Male 153-260 lbs	1-1 ¹ / ₂ "	Deltoid muscle of arm [§]
Female 200+ lbs Male 260+ lbs	1 ¹ / ₂ "	Deltoid muscle of arm [§]

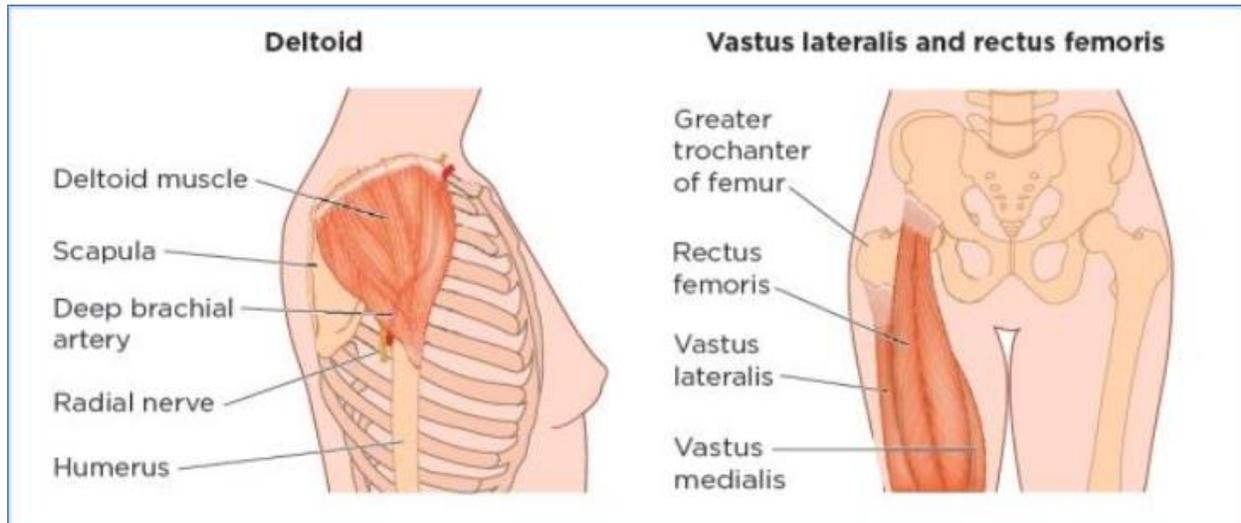
Source: [Immunization Action Coalition](#)

[†] A 5/8" needle may be used in newborns, preterm infants, and patients weighing <130 lbs for IM injections in the deltoid muscle **only** if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle to the skin.

[‡] Preferred site if volume appropriate.

[§] Or anterolateral thigh (vastus lateralis preferred) depending on muscle size and volume.

Figure 1. Location of deltoid, vastus lateralis, and rectus femoris muscles



Volume per injection site

Acceptable volume for a single dose of IG to inject into the deltoid muscle of a normal-weight adult?

- Average 0.5 mL
- Range 0.5–2 mL

Acceptable volume for a single dose of IG to inject into the vastus lateralis of a normal-weight adult?

- Average 1–4 mL
- Range 1–5 mL

Infants and toddlers fall at the lower end of the volume range, whereas adolescents and adults generally fall on the higher end of the range.

Administration of IG and vaccine(s) at the same time:

1. **Inactivated vaccines:** IMIG can be administered simultaneously with, or at any interval before or after, any inactivated vaccine, including hepatitis A vaccine.
2. **Live vaccines**
 - a. **If MMR and/or varicella vaccine has been given within the previous 2 weeks:** Patient should receive IMIG, but should be revaccinated with MMR and/or varicella or tested for seroconversion ≥ 3 months later.
 - b. **If IMIG for hepatitis A postexposure prophylaxis is given first:** Patient should be told to wait 3 months before receiving MMR and/or varicella vaccine.

Table 2. Contraindications and Precautions to Immune Globulin (IG)

Contraindications	Precautions	Not contraindications or precautions
History of an anaphylactic reaction to a previous dose of IMIG	Receipt of measles, mumps, rubella (MMR) or varicella vaccine within the previous 2 weeks ¹	Acute or chronic illness
IgA deficiency or history of reactions related to anti-IgA antibodies (in such cases, use of IgA-depleted intravenous (IV) IG may reduce likelihood of further reaction)	Mild to moderate bleeding disorder or taking anticoagulation medication ²	Recent exposure to an infectious disease
Persons with severe thrombocytopenia or any coagulation disorder that would preclude IM injection; in such cases, IVIG is preferred ²		Currently receiving antimicrobial therapy
		Pregnancy ³ or breast-feeding

1. IMIG given within 2 weeks after measles, mumps, rubella (MMR) or varicella vaccines were administered may interfere with the development of vaccine-induced immunity. The patient should still receive IMIG, but should be referred to their healthcare provider to be revaccinated with MMR or varicella vaccine or be tested for immunity at least 3 months after receipt of IMIG.
2. People with a mild to moderate bleeding disorder or who are taking anticoagulation medication should check with their healthcare provider before receiving IMIG.
3. There is no known risk to the fetus from passive immunization of pregnant women with IMIG. IMIG should be given to pregnant women if it is indicated.

Attachment 1. Patient Screening Tool for Administration of Intramuscular (IM) Immune Globulin (IG) for Hepatitis A Postexposure Prophylaxis

(Adapted from materials provided by the Massachusetts Department of Public Health)

If IG is being administered for hepatitis A exposures that are part of a hepatitis A outbreak, a question pertinent to exposure history may be inserted in the screening tool below.

1. Have you ever received hepatitis A vaccine?	No <input type="checkbox"/> Yes <input type="checkbox"/>	If you received at least 1 dose of hepatitis A vaccine at least one month before your exposure and have a healthy immune system, you are considered protected against hepatitis A and do not need IG.
2. Have you ever had a severe allergic (<u>anaphylactic</u>) reaction to a	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, you should talk to your healthcare provider before getting IG.
3. Have you ever had a reaction related to anti-IgA antibodies, or history of IgA deficiency?	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, you should talk to your healthcare provider before getting IG.
4. Do you have a bleeding disorder or take anticoagulant medication (“blood thinner”)?	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, you should talk to your healthcare provider before getting IG.
5. Have you received measles, mumps, rubella vaccine (MMR) and/or chickenpox vaccine in the last 2 weeks?	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, receiving IG now may interfere with immunity to measles, mumps, rubella and varicella. You should still receive IG today, but 3 months from now you should be revaccinated with MMR or chickenpox vaccine or tested for immunity.
6. Do you plan to receive MMR and/or chickenpox vaccines in the next 3 months?	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, wait 3 months after receiving this dose of IG before receiving MMR or chickenpox vaccines.
7. Do you handle food that is served to non-household members as part of your job or	No <input type="checkbox"/> Yes <input type="checkbox"/>	If yes, health department staff would like to speak with you today.

Attachment 2. Patient Information about Intramuscular (IM) Immune Globulin (IG)

(Adapted from materials provided by the Massachusetts Department of Public Health)

What is immune globulin?

Immune globulin (IG) is a product made from human plasma from thousands of donors. It contains antibodies to hepatitis A and other diseases. Antibodies are proteins that your body makes to help you fight infections. If given within 2 weeks of exposure to hepatitis A virus, IG may prevent hepatitis A infection, or make the symptoms less severe if you become infected.

What are the risks from IG?

Most persons do not have any side effects from IG. However, pain and tenderness may occur at the site(s) where IG was given. Serious allergic reactions are rare, but itching, hives and swelling may also occur. Although IG is made from human plasma, the manufacturing process is designed to inactivate and eliminate possible infectious agents.

Who should contact their healthcare provider before receiving IG?

- Persons with a serious allergic reaction to a previous dose of IG.
- Persons with immunoglobulin A deficiency. These persons may receive a special form of IG by vein.
- Persons who have severe problems with bleeding. Your healthcare provider may decide it is safe for you to receive IG in your muscle, or may decide you should receive it by vein.

Can I receive IG if I'm pregnant or breastfeeding?

Yes. Pregnant or breastfeeding women who have not received hepatitis A vaccine can be given IG if it's recommended after an exposure to hepatitis A virus.

What if I just received, or will soon receive, MMR (measles, mumps, rubella) and/or varicella (chickenpox) vaccines?

- If you received MMR and/or chickenpox vaccine in the last 2 weeks, you can receive IG today. However, you should receive MMR and/or chickenpox vaccine again in 3 months, or get a blood test at that time to see if you are protected against measles, mumps, and rubella, and/or chickenpox.
- If you are planning to get the MMR and/or chickenpox vaccines in the near future, you should wait 3 months after receiving IG.

What should I do if I have side effects?

Contact your healthcare provider if you experience rash or hives (swelling, redness, intense itching, and burning) or if you develop swelling of the lips, other parts of the parts of the mouth and throat, eyelids, genitals, hands or feet. Allergic reactions, although rare, have been reported following injections of IG.

Contact your healthcare provider immediately if you experience any of these side effects:

- Possible allergic reaction: wheezing or trouble breathing, chest tightness, severe abdominal cramps, severe vomiting or severe diarrhea.
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- Possible blood clot: pain and/or swelling of an arm or leg with warmth over the affected area, discoloration of an arm or leg, unexplained shortness of breath, chest pain or discomfort that worsens with deep breathing, unexplained rapid pulse, numbness or weakness on one side of the body.
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