# Issuing Rh Immune Globulin (RhIG)

## Principle

1. Rh Immune Globulin (RhIG) is primarily used to prevent Rh immunization of Rh(D) negative females at risk of developing Rh antibodies which might harm an Rh(D) positive fetus in the present pregnancy or subsequent pregnancies.

## PURPOSE

* 1. This document will provide instructions on how to handle request for RhIg

## Relevant REQUIREMENTS

* 1. RhIG should be administered to each Rh(D) negative woman not known to be immunized to the D antigen, in the following situations:
     + At 28 weeks gestation
     + Delivery of an Rh(D) positive neonate (including weak D positive)
     + Spontaneous or therapeutic abortion
     + Following amniocentesis
     + Bleeding during pregnancy
     + Obstetrical trauma or manipulation with the potential for causing increased risk of fetomaternal haemorrhage. 10.1
  2. Documentation that the patient is Rh(D) negative and that they are not alloimmunized to Rh(D) should be provided before issuing the product. Results of a current (4-6 weeks 14-30 days or as per hospital policy) antibody screen should be available.
  3. RhIG shall be issued within 72 hours of delivery or other possible immunizing event. If 72 hours have passed after delivery, the RhIG shall be given up to 28 days. 10.1
  4. RhIG should be given when Rh(D) positive products containing red cells are given to an Rh(D) negative female of childbearing age and should be considered for Rh(D) negative males. The physician will order the appropriate dose to be given.10.1
  5. A policy shall be established regarding the administration of RhIG to women who type as weak D or variant D positive.10.1
  6. When a weakly reactive anti-D is detected in an Rh(D) negative woman, a determination should be made as to whether she received RhIG during her pregnancy. If receipt of RhIG cannot be established, RhIG should be provided and a sample for RhD Genotyping should be sent to CBS.
  7. A test shall be performed to determine the amount of fetomaternal hemorrhage in an eligible candidate (20 weeks gestation or more). If a fetal bleed is detected an appropriate dose of RhIG shall be given according to the manufacturer’s recommendations.10.1
  8. A current (4-6 weeks 14-30 days or as per hospital policy) antibody screen should demonstrate there are no Rh(D) alloantibodies as per hospital policy.10.3
  9. The product must be requested by a licensed Physician, or other authorized prescriber and administered in accordance with the manufacturer instructions.
  10. The record of administration of RhIG must include the product lot number **and expiry date** 10.3
  11. This product may be requested for Rh(D) positive individuals as part of the medical treatment for idiopathic thrombocytopenia (ITP), but it should only be for the management of life-threatening hemorrhage. 10.3

## Related policies/Procedures *(pOlicies in ottrm)*

1. [Glossary of Terms and Abbreviations](https://orbcon1.sharepoint.com/:w:/s/Goal2/EXQIO0FaXtxGjJ3ZUyEONuQBvYmlPZcjkguZRSZmouJNsw?e=5nMATg)

## MATERIALS

1. **Supplies/Related Forms**
   * 1. **600 IU (120mg) RhIG**
     2. **1500 IU (300mg) RhIG**
     3. **5000 IU (1000mg) RhIG**

## QUALITY CONTROL – N/A

## PROCEDURE

| **STEPS** | **WORK INSTRUCTIONS** |
| --- | --- |
| Receive order for RhIG | * 1. Order requests should come with all required patient information as contained in the addressograph (name, unique number, Health Insurance number, date of birth and Physician). Additional required information includes the patient’s Group and Rh, the name of the ordering HCP and dose. The request should be time stamped when received (or the date and time recorded).  |  |  | | --- | --- | | *If* | *then* | | Patient is an inpatient | Orders may be verbal  (followed with a written request), written or through LIS. | | Patient is an outpatient | Patient will bring in order for RhIG from the physician’s or midwife’s office. Orders should be on a physician’s prescription or a Ministry of Health Form. Both must be signed. | |
| Technologist review of RhIG order | 1. A technologist should verify patient’s results, the indication and patient information and confirm the appropriate dose has been requested. Sign the requisition to document verification. 2. The following table outlines the indications and dosage of RhIG  |  |  | | --- | --- | | INDICATION | **DOSE IU /(mg)**  ***(IM OR IV)*** | | **Obstetrical** |  | | 28 weeks gestation | 1500 (300) | | Threatened abortion at any time | 1500 (300) | | Amniocentesis and chorionic villus sampling before 34 weeks gestation | 1500 (300) | | Postpartum if baby is Rh positive or unknown and Kleihauer result is < 15 mL fetal whole blood | 1500 (300) | | Post therapeutic abortion, amniocentesis or any other manipulation after 34 weeks gestation  Threatened abortion or abortion <12 weeks gestation  Intrauterine fetal demise were FMH is not reliable  Postpartum if newborn is RhD positive, including Weak D positive  Ongoing pre-vaginal bleeding (e.g. placenta previa) | 1500 (300)  600 (120)  1500 (300)  600 (120)  1500 (300) to be repeated after 6 weeks if ongoing similar bleeding and test for FMH at least every 2 weeks | | **Protection** |  | | Rh positive platelets issued to Rh negative recipient (Rh negative women of childbearing potential should be given RhIG when Rh positive platelets are transfused to avoid the risk of formation of anti-D antibody). See Procedural Notes 9.5 | 1500 (300)  A single dose of RhIG should be sufficient to provide protection for multiple platelet transfusions over a 2-4 week period.10.3 | | **Treatment** |  | | Rh(D) positive patients diagnosed with Immune Thrombocytopenia (ITP). See Procedural Notes 9.6 | 5000 (1000) | |
| Issuing of RhIG | 1. The product must be stored at 1-6°C. Physicians and/or midwives are responsible for verifying products were stored appropriately.  |  |  | | --- | --- | | ***If*** | ***then*** | | Product is not picked up the same day | Product can be reserved in the patient’s name. Can be dispensed the day assigned for pick up. | | Product is not infused after pick-up | Transfusion medicine lab must be notified, and product discarded | | Multiple vials are issued to one physician or midwife office | Ensure the vials are from the same lot number where possible |  1. Issue product as per hospital LIS procedures or follow IM.004 – Manual Issuing of Blood Components and Plasma Products Using the Issue/Transfusion Record |

## PROCEDURE NOTES

* 1. A 1500 IU (300mg) dose of RhIG is sufficient to prevent alloimmunization after delivery in 99% of cases. 1500 IU will suppress immunization from 15 mL of red cells (approximately 30 mL fetal whole blood). 10.2 Each 600 IU (120mg) dose of RhIG covers 6mL of red cells (approximately 12 mL whole blood) and lasts about 21 days.
  2. Retrieve patient record. Ensure that all patient identification information corresponds. If it is a post-partum request indicates that her infant was Rh(D) positive - check infant's results.
  3. For external storage of RhIG:
     1. The product must be stored in the refrigerator (1-6°C).
     2. If issued to external sites, physicians, midwives or other licensed HCP should be informed about proper storage of RhIG.
     3. If there is a deviation in storage conditions the product should not be used. The product should be returned to the issuing facility for proper disposal.
     4. An agreement shall be generated in which both parties agree to comply to the applicable standards.
  4. If for some reason the product is not given to the patient for whom it was issued, the TS Laboratory must be informed by phone and the product returned immediately.
  5. The TS Medical Director or designate should be consulted to determine the amount of RhIG to issue. The risk of anti-D immunization from Rh(D) positive red cells present in platelet products is very rare (risk is even lower for apheresis platelet products) however the theoretical risk exists therefore, it is prudent to provide protection for Rh(D) negative recipients of child bearing potential.10.3
  6. Doses of 5000 IU (1000mg) are available for patients receiving the product for treatment of ITP. RhIG is only effective in this indication for Rh(D) positive patients and has been implicated in severe hemolysis of the patient’s red cells and, as a result, is not used often for this indication (25 to 75mg/kg by intravenous).

## References

* 1. CSTM Standards for Hospital Transfusion Services v5 December 2021. CSTM. Markham; 2021; 5.4.4.5
  2. Cohen CC, Delaney M, Johnson ST, Katz LM. Technical Manual 20th ed. Bethesda: AABB; 2020. p530,565, 568.
  3. CAN/CSA-Z902:20. Blood and Blood Components. National Standard of Canada Toronto;2020. 11.4, 11.9
  4. Callum JL, Pinkerton PH, Lima A, Lin Y, Karkouti K, Lieberman L “et al.” Bloody Easy 4 Toronto: ORBCoN; 2016; 29
  5. Rh Program of Nova Scotia, Halifax, Nova Scotia Revised January 2017

## Revision History

|  |  |
| --- | --- |
| Revision Date | Summary of Revision |
| August 8, 2014 | * Revised name of manual * Revised and renumbered sections 2.0 & 8.0 * Revised table in section 6.1 * Revised wording of section 6.2 to include “The name of the ordering HCP” * Updated list of references to include most recent editions |
| July 15, 2021 | * Revised and renumbered sections * Addition of Purpose * Revised table in Section 7.1 * Updated list of references to include most recent editions |