Transfusionists Talk – Transfusion Made Bloody Easy

RH(D) IMMUNE GLOBULIN (RhIg): TRANSFUSIONISTS QUESTIONS ANSWERED …

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Obstetric Indication Summary

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Sensitizing event: Clinical condition/event associated with potential placental trauma or disruption of the fetomaternal interface. **FMH:** fetomaternal hemorrhage **Volume of fetal red blood cells considered potentially sensitizing** (leading to formation of anti-D antibody): 0.1 mL Rh(D) positive red blood cells.	
RhIg dose: • 1,500 IU (300 mcg) protects against 30 mL fetal blood (15 mL fetal red blood cells). • 600 IU (120 mcg) protects against 12 mL fetal blood (6 mL fetal red blood cells).	
Gestational Age	**Guidance**
< 8 weeks	• If potentially sensitizing events, i.e., threatened, spontaneous, or induced abortion, RhIg is not required.
After 8 weeks	• Gestational Parent: blood group type and antibody screen. If serological Rh (D) test results: weak, inconclusive, or discrepant, then Rhesus Blood Group, D Antigen (RHD) genotyping required. ○ RHD genotype weak D type 1, 2, or 3: consider patient Rh(D) positive, RhIg not required. ○ RHD genotype any weak D type other than 1, 2, or 3 or partial D variant: consider patient Rh(D) negative, standard RhIg prophylaxis required. • Cell-free fetal DNA (cffDNA) gestational parent blood test (non-invasive testing of the fetus) determines if fetus is Rh (D) positive or negative; provides opportunity for targeted antenatal RhIg treatment; currently is not the universal standard of care in Canada.
< 20 weeks **8-12 weeks** **≥ 12 weeks**	*Sensitizing event:* threatened, spontaneous, or induced abortion; molar pregnancy (partial or unknown), ectopic pregnancy. NOTE: 20 weeks gestation estimated fetoplacental blood volume: 30 mL. • The evidence regarding the fetal red blood cells entering maternal circulation is or is not sufficient to lead to sensitization is incongruent. • May consider not giving or giving RhIg following risks/benefits discussion (600 or 1,500 IU; little evidence re: dose). • Give RhIg 1,500 IU, quantification of FMH is not necessary.
> 20 weeks	*Sensitizing event/FMH:* placental abruption, bleeding placenta previa, blunt abdominal trauma, unexplained uterine bleeding. • Quantification of FMH recommended (Kleihauer-Betke test, Flow cytometry; Rosette is a screening test). ○ Fetal bleed < 12 mL, give RhIg 600 IU ○ Fetal bleed 12 – 30 mL, give RhIg 1,500 IU ○ Fetal bleed ≥ 30 mL, give RhIg 1,500 IU & additional RhIg 50 IU/1 mL fetal bleed > 30 mL.

> 20 weeks continued	NOTE: Ongoing antepartum hemorrhage (RhIg was given for initial sensitizing event): serial quantitative FMH testing q 2-3 weeks, FMH positive, give additional RhIg (50 IU/1 mL fetal bleed, round up to vial size). *Sensitizing event/FMH:* Procedure: amniocentesis, chorionic villous sampling, cordocentesis, external cephalic version • Give RhIg 1,500 IU. NOTE: Amniocentesis/chorionic villus sampling, per product monograph repeat RhIg every 12 weeks during the pregnancy.
28 weeks	**Routine antenatal prophylaxis.** Should be given, regardless of additional RhIg previously given for potentially sensitizing events/FMH. • SOGC recommends single dose: 1,500 IU at 28 weeks gestation. • Alternate 2-dose regimen: 600 IU per dose at 28 & 34 weeks gestation. NOTE: SOGC suggests 28 week antibody screening (to identify a gestational parent who may need other, more intensive monitoring and/or treatment due to the presence of other alloantibodies). RhIg administration should not be deferred pending antibody screen results.
Delivery/ Postpartum	• To determine if RhIg is needed, newborn blood typing using cord blood. • If newborn is Rh (D) negative, RhIg is not required. • If newborn is Rh (D) positive, RhIg prophylaxis is required. This RhIg dose is **routine postpartum prophylaxis.** Should be given, regardless of additional RhIg previously given for potentially sensitizing event/FMH. • A single dose of 600 IU or 1,500 IU can be given; quantification of FMH is required to determine if additional RhIg is needed. • Timing of RhIg: Ideally give RhIg within 72 hours of delivery. Otherwise, give RhIg 1,500 IU as soon as the need is recognized, for up to 28 days following delivery.

References:
1. Fung-Kee-Fung K, Wong K, Walsh J, Hamel C, Clarke G. The Society of Obstetricians and Gynaecologists of Canada (SOGC) Clinical Practice Guidelines. Guideline No. 448: Prevention of Rh D Alloimmunization, Journal of Obstetrics and Gynaecology Canada, Volume 46, Issue 4, 2024, 102449, ISSN 1701-2163, https://doi.org/10.1016/j.jogc.2024.102449.
2. KI BioPharma LLC Distributor (in Canada) Accuristix WINRHO® SDF product monograph [Internet]. [Vaughan, Ontario, Canada], [Publisher unknown] 2022 Jun 27 [cited 2025 Mar 13]. Available from: https://pdf.hres.ca/dpd_pm/00066449.PDF