Anti-D Immunoglobulin (Ig) Administration in Pregnancy- an aide memoire

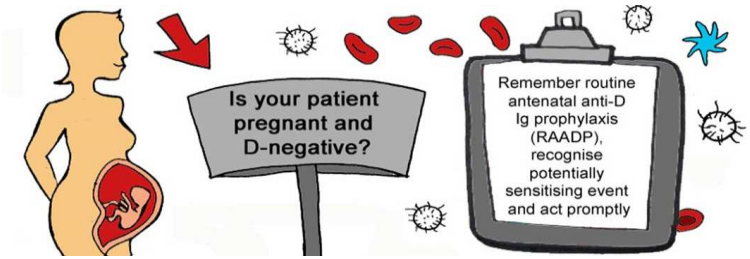
Key points to note:

- Women who are confirmed to have immune (allo) anti-D do not need (or should not receive) anti-D Ig
- Where the results of the cell free fetal DNA (cffDNA) screening test are available and show that the fetus/baby is D-negative, anti-D Ig does not need to be given
- Confirm that the cffDNA result relates to the current pregnancy
- Person administering anti-D Ig should confirm the woman's identity, discuss risk/benefits, gain informed consent and record in patient's notes. Confirm product dose and expiry date
- Following potentially sensitising events (*PSE- see appendix 1)*, anti-D Ig should be administered as soon as possible and always within 72 hours of the event. If, exceptionally, this deadline has not been met some protection may be offered if anti-D Ig is given up to 10 days after the sensitising event
- Each new sensitising event should be managed with a dose of anti-D Ig independent of previous or subsequent planned doses (including RAADP)
- In the event of continual uterine bleeding which is clinically judged to represent the same sensitising event, with no features suggestive of a new presentation or a significant change in pattern or severity of bleeding, a minimum dose of 500 IU anti-D Ig should be given at 6 weekly intervals. Feto-maternal haemorrhage (FMH) screening should be performed every 2 weeks from 20 weeks onwards
- Appropriate tests for FMH should be carried out for all D-negative, pregnant women who have had a PSE after 20 weeks of gestation and additional dose(s) of anti-D Ig should be administered as indicated. Tests for FMH are also indicated if cell salvage has been used as top up doses (>1500 IU recommended) may be needed
- Routine Antenatal Anti-D Ig Prophylaxis (RAADP) is a separate entity for unidentified events through to delivery, and should always be given at the appropriate time in the second trimester, even if the woman has already received one or more doses of anti-D Ig for PSE
- A minimum dose of 1500 IU should be given where autologous cell salvage products have been reinfused

Potentially sensitising events (PSEs) during pregnancy *(see Appendix 1 on next page)*	
Gestation LESS than 12 weeks	
All surgically managed abortions, ectopic/molar pregnancies and miscarriages	Administer at least **500 IU*** anti-D Ig within 72 hours of event. Confirm product / dose / expiry and patient ID pre-administration Test for FMH (screening and confirmatory) are not required
Medical abortions beyond 10 weeks	
Gestation 12 to 20 weeks	
For any potentially sensitising event (PSE) including medical and surgical miscarriages, abortions and ectopic/molar pregnancies	
For continuous uterine bleeding (see key points above)	

Please note that while the BSH guidance regarding the amount of anti-D Ig to be given for <12 weeks and 12-20 weeks remains as 250 IU, no 250 IU vials are currently available. To avoid/prevent underdosing or errors with administration, the dose included here is '500 IU' which is the lowest dose of anti-D Ig preparation that is available.

Gestation 20 weeks to term	
For any potentially sensitising event (PSE) (**Irrespective** of whether RAADP has been, or is planned, to be given imminently)	Request a test for FMH (e.g., Kleihauer test) and immediately administer at least **500 IU** anti-D Ig within 72 hours of event
If the test for FMH indicates that further anti-D Ig is required (Fetal bleed volume needs to be ascertained using more sensitive techniques such as flow cytometry)	Administer additional anti-D Ig following discussion with laboratory, adhere to follow up FMH testing requested by laboratory to ensure all fetal cells are cleared

Routine Antenatal Anti-D Prophylaxis (RAADP)	
For Routine Antenatal Anti-D Prophylaxis (**Irrespective** of whether anti-D Ig already given for PSE)  	Take a blood sample to confirm group and antibody screen – do not wait for results before administering anti-D Ig Administer **1500 IU** anti-D Ig at **28 – 30** weeks **OR** Administer at least **500 IU** anti-D Ig at **28** weeks and then administer at least **500 IU** anti-D Ig at **34** weeks
At delivery or intrauterine death (IUD) >20 weeks	
If the baby's group is confirmed as D-positive or baby's group is unknown OR If cord samples are not available following IUD	Request a test for FMH (e.g., Kleihauer test) Administer at least **500 IU** anti-D Ig within 72 hours of delivery
If the test for FMH (e.g., Kleihauer Test) indicates that further anti-D is required	Administer additional anti-D Ig following discussion with laboratory, adhere to follow up FMH testing requested by laboratory to ensure all fetal cells are cleared
Where **intra-operative cell salvage** has been used during Caesarean section in D-negative, previously non-sensitised individuals and where cord blood group is confirmed as D positive (or unknown) Clinicians must inform the transfusion laboratory if intra-operative cell salvage has been used to ensure that correct dose of anti-D Ig is issued. Fetal bleed volume needs to be ascertained by confirmatory methodologies e.g., flow cytometry	Administer at least **1500 IU** anti-D Ig following re-infusion of salvaged red cells Maternal sample should be taken for estimation of FMH (e.g., Kleihauer test) 30–45 min after reinfusion in case more anti-D Ig is indicated FMH testing is repeated 72hours after total dose has been given to ensure all fetal cells are cleared

Safe administration and documentation practice:

1. Confirm patient ID with the prescription/product label
2. Confirm cffDNA result for current pregnancy
3. Confirm the anti-D Ig dose is correct
4. Confirm the anti-D Ig has not expired
5. Take group and screen prior to administration but do not wait for results
6. Record anti-D Ig batch number & administration date in clinical notes

Appendix 1- Potentially sensitising events in pregnancy (From the 'BCSH guideline for the use of anti-D immunoglobulin for the prevention of haemolytic disease of the fetus and newborn 2014 ')

Amniocentesis, chorionic villus biopsy and cordocentesis	*Intrauterine death and stillbirth*
Antepartum haemorrhage/Uterine (PV) bleeding in pregnancy	*In-utero therapeutic interventions (transfusion, surgery, insertion of shunts, laser)*
External cephalic version	*Miscarriage, threatened miscarriage*
Abdominal trauma (sharp/blunt, open/closed)	*Therapeutic termination of pregnancy*
Ectopic pregnancy	*Delivery – normal, instrumental or Caesarean section*
Evacuation of molar pregnancy	*Intra-operative cell salvage*

This aide-memoire is based on BSH Guidelines titled 'BCSH guideline for the use of anti-D immunoglobulin for the prevention of haemolytic disease of the fetus and newborn 2014'.NICE guidance documents can be found at: NG 126 (https://www.nice.org.uk/guidance/ng126/chapter/Recommendations#anti-d-rhesus-prophylaxis) and NG 140 (https://www.nice.org.uk/guidance/ng140/chapter/Recommendations#anti-d-prophylaxis). Please note that this has been reviewed and approved by the BSH Transfusion Taskforce and is only for reference to help draft checklists locally.