Guidelines for administration of Anti-D immunoglobulin to sensitized Rh negative mothers

How Should Anti-D Ig Be Administered?

For successful immunoprophylaxis, anti-D Ig should be given as soon as possible after the potentially sensitizing event but always within 72 hours. If it is not given before 72 hours, every effort should still be made to administer the anti-D Ig, as a dose given within 10 days may provide some protection.

Prophylaxis Following Miscarriage, Ectopic Pregnancy and Termination of Pregnancy

When Is Anti-D Ig Prophylaxis Required Following Miscarriage, Ectopic Pregnancy and Termination of Pregnancy?

When indicated, anti-D Ig is administered in a dose of 250 IU up to 19 weeks of gestation and in a dose of 500 IU thereafter. A test for the size of FMH should be performed when anti-D Ig is given at or after 20\textsuperscript{th} weeks of gestation.

**Miscarriage**

- Anti-D Ig should be given to all non-sensitized RhD-negative women who have a spontaneous complete or incomplete miscarriage at or after 12 weeks of gestation.
- Anti-D Ig is not required for spontaneous miscarriage before 12\textsuperscript{th} weeks of gestation, provided there is no instrumentation of the uterus.
- Anti-D Ig should be given to non-sensitized RhD-negative women undergoing surgical evacuation of the uterus, regardless of gestation.
- Anti-D Ig should be considered for non-sensitized RhD-negative women undergoing medical evacuation of the uterus, regardless of gestation.

**Threatened Miscarriage**

- Anti-D Ig should be given to all non-sensitized RhD-negative women with a threatened miscarriage after 12 weeks of gestation. In women in whom bleeding continues intermittently after 12 weeks of gestation, anti-D Ig should be given at 6-weekly intervals.
- Anti-D Ig should be considered in non-sensitized RhD-negative women if there is heavy or repeated bleeding or associated abdominal pain as gestation approaches 12 weeks.

**Ectopic Pregnancy**

- Anti-D Ig should be given to all non-sensitized RhD-negative women who have an ectopic pregnancy, regardless of management.

**Therapeutic Termination of Pregnancy**

- Anti-D Ig should be given to all non-sensitized RhD-negative women having a therapeutic termination of pregnancy, whether by surgical or medical methods, regardless of gestational age.

Prophylaxis Following Sensitizing Events Before Delivery

Which Antenatal Sensitizing Events Require Anti-D Ig Prophylaxis?

- A minimum dose of 250 IU is recommended for prophylaxis following sensitizing events up to 19\textsuperscript{th} weeks of gestation. For all events at or after 20 weeks of gestation, a minimum dose of 500 IU anti-D Ig should be given and a test to identify FMH greater than 4 ml red cells performed; additional anti-D Ig should be given as required.
- In the event of recurrent vaginal bleeding after 20\textsuperscript{th} weeks of gestation, anti-D Ig should be given at a minimum of 6-weekly intervals.

Anti-D Ig should be given to all non-sensitized RhD-negative women after the following potentially sensitizing events during pregnancy; this should be in addition to any already received:

- Invasive prenatal diagnosis (amniocentesis, chorion villus sampling, cordocentesis, intrauterine transfusion)
- Other intrauterine procedures (e.g., insertion of shunts, embryo reduction, laser)
- Antepartum haemorrhage
- External cephalic version of the fetus (including attempted)
- Any abdominal trauma (direct/indirect, sharp/blunt, open/closed)
- Fetal death

If there is concern about the frequency of recurrent bleeding, estimation of FMH using a Kleihauer test can be performed at 2-weekly intervals; if positive, an additional dose of anti-D Ig can be administered (500 IU or greater, depending on the size of the FMH). This dose is given irrespective of the presence or absence of passive anti-D.
Routine Antenatal Prophylaxis

How Should a Routine Antenatal Anti-D Prophylaxis (RAADP) Be Put into Clinical Practice?
- RAADP should be offered to all non-sensitized RhD-negative women.
- The routine 28-week antibody screening sample must be taken before administration of the first dose of anti-D. This meets the British Committee for Standards in Haematology requirement for a second antibody screen during pregnancy.

What Are the Maternal and Fetal Effects of RAADP?
- There is no evidence to suggest that RAADP is associated with adverse events that are of consequence for the mother or baby, other than the possibility of blood-borne infection, and procedures are in place to minimise these risks.

How Should Women Who Decline RAADP Be Managed?
- In the event that RAADP is declined antibody screening should be performed at booking and at 28 weeks of gestation to identify cases where sensitisation has occurred. Sensitisation occurring in the third trimester is unlikely to cause significant fetal problems in that pregnancy.

Some women will decline RAADP, and certain subgroups can be identified:
- Women who object on religious grounds
- Women who will be sterilized after the birth
- Women who are certain they will have no more children
- Women who are in a stable relationship with the genetic father of their children and the father is known or found to be RhD-negative

Although it is desirable to avoid unnecessary RAADP, there are potential problems with the latter two groups: women may change their minds about a further pregnancy, and there are known complexities associated with paternal testing with potential for misidentification of the father.

Women should be given adequate information with which to make an informed choice about accepting or declining anti-D Ig. If a woman declines anti-D Ig, this decision should be acknowledged and the reasons for the decision documented in the case notes.

Postnatal Prophylaxis

Who Should Receive Postnatal Anti-D Ig Prophylaxis?
- At least 500 IU of anti-D Ig must be given to every non-sensitized RhD-negative woman within 72 hours following the delivery of an RhD-positive infant.
- A test to detect FMH greater than 4 ml must also be undertaken so that additional anti-D Ig can be given as appropriate.
- If the pregnancy is non-viable and no sample can be obtained from the baby, anti-D Ig should be administered to a non-sensitized RhD-negative woman.

Some women who have received anti-D Ig during pregnancy may have detectable anti-D in their blood at delivery. Because it may be difficult or impossible to distinguish between such passive anti-D Ig and weak anti-D resulting from early immunisation, anti-D Ig should be given to any eligible woman with weak anti-D antibody at delivery unless it has been clearly confirmed that she is already sensitized.