Anti-D Postnatal

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1. Purpose of guideline

This guideline establishes the expected process for the administration of postnatal anti-D immunoglobulin in order to minimise Rhesus iso-immunisation and haemolytic disease of the fetus/newborn, (HDN) within Auckland District Health Board (ADHB). It addresses anti-D immunoprophylaxis (ADP) of the RhD negative mother who has delivered an RhD positive baby.

The development of anti-D antibodies usually occurs as a result of a fetomaternal haemorrhage (FMH) at birth in a rhesus D (RhD) negative mother carrying an RhD positive fetus. Most women have an FMH of < 6 ml at delivery (>90%). For these women 625IU of anti-D is sufficient to protect the mother from making anti-D red cell antibodies (sensitisation).

A Kleihauer test will ascertain the quantity of fetal blood cells in the maternal blood, diagnose those with a large FMH and guide the practitioner as to the dose of anti-D required. All RhD negative women who have delivered an RhD positive baby should have a Kleihauer blood test within 2 hours of birth.

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2. Blood sampling

When a woman with RhD negative (or unknown) blood type gives birth, after discussion with her, a cord blood sample should be sent to the laboratory to identify the Rh status of the newborn. If the baby is RhD negative no further action is required.

A maternal blood sample (purple topped EDTA tube) for a Kleihaur screening test should be performed within 2 hours of birth on RhD negative women if their baby is identified as being Rh positive. The Kleihaur test identifies women with a large FMH who may require additional ADP using the following scale.

FMH	ADP
0 – 6 mls	1 ampoule (625IU)
> 6 mls	Consult senior staff and NZ Blood Service

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3. Administration of anti-D

- Before anti-D can be administered, the woman must receive a full explanation, written information and give informed written consent. Form CR0111 & NZ Blood anti-D information leaflet
- At least 625IU of anti-D should be given to every non-sensitised RH-D negative woman who gives birth to a RhD positive infant, even when the Kleihauer test is negative
- Anti-D should be given as soon as possible after the birth and within 72 hours, regardless of prior routine ADP or for a sensitising event
- Where delays occur with fetal blood analysis, for example a clotted specimen or no specimen sent, perform the Kleihauer screening test within 2 hours and retest the

baby by micro collect at the earliest opportunity. Aim to administer the correct dose of anti-D within 72 hours

- Whenever a sample cannot be obtained from the baby the woman should be treated as if the infant was RhD positive, have a Kleihauer test and receive anti-D
- Intramuscular anti-D is best given into the deltoid muscle (upper arm) to avoid slow absorption through subcutaneous tissues that can occur when using the gluteal muscle
- Women with severe thrombocytopenia and women who will require multiple ampoules of anti-D for a very large fetomaternal bleed should receive the intravenous form of anti-D
- Transfer to Auckland Birthcare need not be delayed by this process; ensure handover is thorough and liaise regarding administration of anti-D

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4. Supporting evidence

- The NZ Blood Transfusion Medicine Handbook, a guide to the clinical use of Blood Components, Blood Products and Blood Transfusion Procedures in New Zealand, 2008
- The Royal College of Obstetricians and Gynaecologists Green Top Guideline number 22, March 2011 (available in Labour and Delivery suite for perusal)

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5. Associated ADHB documents

Blood Transfusion Resource Folder
Intrapartum care Normal Labour and Birth

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6. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this ADHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

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7. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed ***before*** the scheduled date, they should contact the owner or the Clinical Policy Advisor without delay.

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