

# WHICH ANTIBODIES ARE IMPORTANT IN CAUSING HDN?

There are many different blood group antigens on our red cells. Many of these (though not all) can cause HDN. If any fetal red cells (with their antigens) cross the placenta then the mother can form antibodies against an antigen that is different to her own.

RhD is the most important antigen causing HDN. An RhD negative mother can form immune anti-D antibodies if she is carrying an RhD positive baby. She *might* also form antibodies if she receives a blood transfusion. These immune antibodies can then cause HDN in future pregnancies.

**Prevention of RhD HDN**  
Giving Anti-D to an RhD negative mother after a Potentially Sensitising Event (PSE), as part of Routine Antenatal Anti-D Prophylaxis (RAADP) and post delivery reduces the chances of her forming her own immune anti-D antibodies (ie becoming sensitised).

Anti-c and anti-K are also capable of causing severe HDN and must be monitored as carefully as anti-D.

Many other antibodies can cause HDN.

All mothers with immune antibodies must be discussed with a consultant obstetrician and if at risk of HDN must be referred for expert management. Close collaboration is needed between obstetricians, midwives, neonatal teams, haematologists and the transfusion laboratory.

