

## Anti-D Information Sheet

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### The Rhesus factor – what does it mean to have a negative blood group?

We have all heard of blood groups, A, B, AB and O, but there is also a Rhesus or Rh factor. Most people have the Rh factor – their blood group is Rh positive. If your blood group is type A and you have the Rh factor, your blood type is known as “A positive”. Some people do not have the Rh factor and their blood groups are known as Rh negative.

### How do you get the Rh factor?

The Rh factor is a protein that is translated from a gene and it is inherited from your parents (or not). The Rh factor is expressed on the surface of your red blood cells. Having just one copy or dose of the Rh factor makes your blood cells Rh positive. You can be Rh positive if you inherited just one copy of the Rh factor (from one of your parents) or a “double dose” or two copies of the Rh factor (a copy from each of your parents).

If neither of your parents passed down a copy of the Rh factor to you, then you are “Rh negative”. This means no Rh factor is expressed on your red blood cells’ surface at all.

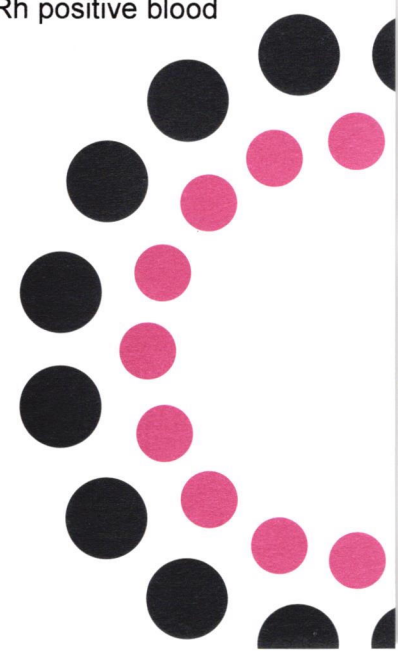
### What’s the problem being Rh negative?

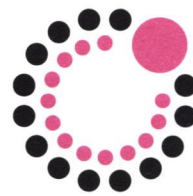
Here’s where things get a little complicated.

The Rh factor can be inherited from either parent. Only one Rh copy is needed for a baby to have a Rh positive blood group. If a baby’s father (or sperm donor) has an Rh positive blood group, the baby’s blood group might turn out to be Rh positive.

If a mother who is Rh negative has a baby who is Rh positive, the mother’s immune system can become “Rh sensitised”. This means the mother’s immune defences can recognise the baby’s blood as foreign and attack the baby. This problem is called Rh incompatibility.

It usually does not occur in a first pregnancy, but can occur in a later pregnancy. Women can be Rh sensitised by an





ongoing pregnancy or following a miscarriage or ectopic pregnancy.

### How does Rh sensitization occur during pregnancy?

During pregnancy, the woman and baby do not share blood circulation.

However, a small amount of blood from the baby can cross the *placenta* into the woman's circulation. This sometimes may

happen during pregnancy, labour, and birth. It also can occur if an

Rh-negative woman has had any of the following during pregnancy:

- Miscarriage
- Ectopic pregnancy
- Chorionic villus sampling (CVS)
- Amniocentesis
- Bleeding during pregnancy
- Blunt trauma to the abdomen during pregnancy

### Can Rh sensitization be prevented?

Yes. If you are Rh negative, you will be given an injection of Anti-D routinely a few times during your pregnancy and after delivery. If you have a miscarriage or a sensitizing event listed above, you may require further doses of Anti-D.

### What is Anti-D?

Anti-D is made from donated blood. When given to a non-sensitised Rh-negative person, it targets any Rh-positive cells in the bloodstream and prevents the production of Rh antibodies (immune system warriors). When given to an Rh-negative woman who has not yet made antibodies against the Rh factor, Anti-D can prevent this from happening. If you are Rh negative and have any bleeding during a pregnancy, the thing to remember is to present to your doctor or to an emergency department within 12-72 hours to have an Anti-D injection.

For further information, the following resources are recommended:

[https://transfusion.com.au/disease\\_therapeutics/fetomaternal/hdn](https://transfusion.com.au/disease_therapeutics/fetomaternal/hdn)

[https://www.ranzcog.edu.au/RANZCOG\\_SITE/media/RANZCOG-](https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Guidelines-for-the-use-of-Rh(D)-Immunoglobulin-(Anti-D)-(C-Obs-6)-Review-November-2015.pdf?ext=.pdf)

[MEDI/Women%27s%20Health/Statement%20and%20guidelines/Clinical-](https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Guidelines-for-the-use-of-Rh(D)-Immunoglobulin-(Anti-D)-(C-Obs-6)-Review-November-2015.pdf?ext=.pdf)

[Obstetrics/Guidelines-for-the-use-of-Rh\(D\)-Immunoglobulin-\(Anti-D\)-](https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Guidelines-for-the-use-of-Rh(D)-Immunoglobulin-(Anti-D)-(C-Obs-6)-Review-November-2015.pdf?ext=.pdf)

[Obstetrics/Guidelines-for-the-use-of-Rh\(D\)-Immunoglobulin-\(Anti-D\)-\(C-Obs-6\)-Review-November-2015.pdf?ext=.pdf](https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical-Obstetrics/Guidelines-for-the-use-of-Rh(D)-Immunoglobulin-(Anti-D)-(C-Obs-6)-Review-November-2015.pdf?ext=.pdf)

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