



**The Royal Australian  
and New Zealand  
College of Obstetricians  
and Gynaecologists**  
*Excellence in Women's Health*

# Umbilical Cord Blood Banking

## What is umbilical cord blood?

Umbilical cord blood is the blood remaining in the umbilical cord and placenta after your baby's birth. Cord blood is normally thrown away after birth; however, it can be collected at birth and stored for possible use in the future.

## What can umbilical cord blood be used for?

Umbilical cord blood is a rich source of stem cells, which are the building blocks of blood cells in our bodies. Stem cells can be used in the treatment of a range of blood disorders and conditions of the immune system for both children and adults. The diseases currently most commonly treated using stem cells are:

- Immune deficiency, when your body is unable to fight disease
- Leukaemias
- Blood diseases, such as aplastic anaemia
- Metabolic disorders, which interfere with the process by which the body gets energy from food
- Thalassaemia, a blood disorder that affects the way the body makes haemoglobin (a protein in your red blood cells that transports oxygen in your blood)

Some commercial groups claim that cord blood can prevent or cure a range of diseases, but there is currently insufficient evidence to prove this. In the future, the range of diseases treated using cord blood might be expanded as science and technology advances.

## How is cord blood collected?

Cord blood can be collected after the umbilical cord has been cut following either a vaginal or caesarean birth. The type of birth does not affect the collection of cord blood. The collection process is quick and painless for both mother and baby, and is performed by a trained cord blood collector, obstetrician or midwife.

A needle is inserted into the umbilical cord vein attached to the placenta and the blood left in the umbilical cord and placenta is drained into a collection bag. The cord blood collection takes about three minutes and can occur either before or after the placenta has been delivered.

Once collected, the cord blood is stored frozen for future use.

## Can I have delayed cord clamping and then bank the cord blood?

Delayed cord clamping is the practice where the umbilical cord is not clamped or cut until after pulsations have ceased, or until after the placenta is delivered. You are not able to delay cord clamping when collecting umbilical cord blood as the cord must be clamped early to capture the most stem cells.

## What is required if I wish to donate my baby's cord blood?

Participation in donation programs is completely voluntary. There may be circumstances when cord blood collection cannot be guaranteed. This is as staff priority is to provide optimal care to mother and baby and due to the availability of collection staff.

If enough stem cells are collected to bank the cord blood, you will be

asked to complete a questionnaire about your personal and family medical history and give a blood sample which is tested to determine eligibility. After a period of six months, you will be contacted to check on the health of your baby since donation. This information is required to ensure the safety of blood and cell products for use in the future.

All information related to your cord blood donation and your medical and family history is allocated a unique reference number. Only staff at the cord blood bank are able to link this number to your personal details. All information identifying you and your baby is kept confidential and is not passed on to anyone other than you, your doctor and other healthcare professionals involved in your or your baby's care.



## What are my options to bank my baby's cord blood?

In Australia, there are two options:

1. Donate to a Public cord blood bank. If an altruistic non-directed donation is chosen, donated cord blood is made available to all patients in need of a blood stem cell transplant in Australia or overseas. No fee is charged for storage. This cord blood will not be kept specifically for your family's use. In special circumstances, your baby's cord blood will be made available for use by your baby or another family member, if it is still in the bank.
2. Storage in a Private cord blood bank for potential use only by your baby or other family members. These banks are private companies and charge a fee for their processing and storage services. The main idea behind storing your baby's blood in a private cord bank is that one day, your child may become ill and you may be able to use those stem cells for treatment. Parents should be aware that many diseases cannot be treated with stem cells, especially if the disease is genetic in origin. This type of banking cannot be viewed as a health insurance policy.

In New Zealand, the only option is to have it banked privately.

## Are there any risks involved?

There are no risks to your baby, as cord blood collection does not start until after the umbilical cord has been clamped and cut. The risks to the mother are due to having a blood sample collected and may include discomfort, bruising and, rarely, infection at the site.

Further information can be found at AusCord, the Australian network of umbilical cord blood banks at:  
<http://www.abmdr.org.au/auscord/>



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