

Cellsense Pty Ltd

General Information and Frequently Asked Questions

INDEX

QUESTION	PAGE NUMBER
WHAT ARE STEM CELLS	4
WHY SHOULD I STORE STEM CELLS DERIVED FROM MY BABY'S CORD BLOOD	4
WHAT ARE SOME OF THE MEDICAL CONDITIONS IN WHICH STEM CELLS ARE USED?	4
WHAT ABOUT THE FUTURE?	4
WHY SHOULD I STORE CORD BLOOD STEM CELLS NOW? IF THEY ARE NEEDED IN THE FUTURE WHY NOT TAKE THEM FROM BONE MARROW?	5
I HEARD THAT A BABY'S OWN STEM CELLS ARE UNABLE TO TREAT CONDITIONS SUCH AS LEUKAEMIA BECAUSE THEY ARE GENETICALLY CODED WITH THE DISEASE. IS THIS TRUE?	5
WHY SHOULD I COLLECT AND STORE WITH CELL SENSE AS OPPOSED TO ANOTHER PRIVATE COMPANY?	5
WHY SHOULD I COLLECT AND STORE WITH CELL SENSE AS OPPOSED TO DONATING TO THE PUBLIC CORD BLOOD BANK (AUSCORD)?	6
IS STORING MY BABY'S CORD BLOOD STEM CELLS LIKE AN "INSURANCE POLICY" FOR THE FUTURE?	6
AT BIRTH WHEN SHOULD MY BABY'S UMBILICAL CORD BE CLAMPED?	6
WHAT LENGTH OF UMBILICAL CORD IS REQUIRED FOR THE COLLECTION OF CORD BLOOD?	6
WHAT HAPPENS IN THE CASE OF A CAESARIAN, FORCEPS OR VACUUM ASSISTED BIRTH?	6
WHAT HAPPENS IF MY BABY IS BORN PREMATURE?	6
WHAT HAPPENS IF AN INADEQUATE AMOUNT OF CORD BLOOD IS COLLECTED?	7

INDEX

QUESTION	PAGE NUMBER
HOW ARE STEM CELLS STORED?	7
I HAVE COMPLETED THE MEDICAL QUESTIONNAIRE AND ANSWERED "YES" TO A NUMBER OF QUESTIONS. DOES THIS MEAN MY BABY'S CORD BLOOD CANNOT BE COLLECTED AND STORED?	8
WHAT SCREENING TESTS ARE PERFORMED ON THE MATERNAL BLOOD SAMPLE?	8
CAN MY STORED STEM CELLS BE SOLD OR PASSED ON TO ANOTHER COMPANY?	8
I LIVE IN A RURAL PART OF THE COUNTRY. CAN I STILL HAVE MY BABY'S CORD BLOOD COLLECTED AND STEM CELLS STORED?	9
IS THERE AN ADDITIONAL SURCHARGE IF MY BABY IS BORN ON A WEEKEND OR PUBLIC HOLIDAY?	9

GENERAL INFORMATION AND FREQUENTLY ASKED QUESTIONS.

- **WHAT ARE STEM CELLS?**

Stem cells are the pre-cursors of nearly all mature cells in the body. They can be encouraged to develop into specific types of cells, meaning they have the potential to treat and cure many common conditions.

The stem cells derived from umbilical cord blood are known as 'adult stem cells'. These cells are relatively simple to collect and are an important resource, which may be used in the future.

- **WHY SHOULD I STORE STEM CELLS DERIVED FROM MY BABY'S CORD BLOOD?**

Cord blood stem cells are a perfect match for the baby from whom they originated however, they have a high chance of being a perfect or viable match for a sibling. Depending on tissue type compatibility and your doctor's opinion, these stem cells may also be used in treatments for parents and other family members.

- **WHAT ARE SOME OF THE MEDICAL CONDITIONS IN WHICH STEM CELLS ARE USED?**

Currently, cord blood stem cells are being used in the treatment of over forty medical conditions. Some of these include; metabolic disorders, genetic disorders, immune disorders, thalassaemia, sickle cell disease, aplastic anaemia, Fanconi's anaemia, lymphomas, Severe Combined Immune Deficiency Syndrome, numerous leukaemias, angiogenesis and metastatic eye tumours. Recently, cord blood stem cells have been used to repair heart muscle after heart attack and injury.

- **WHAT ABOUT THE FUTURE?**

There is considerable research being undertaken into cord blood stem cell application by Cell Sense and numerous other institutions.

Currently, stem cells have been shown to imitate insulin-producing pancreatic cells, skeletal muscle cells, bone cells, cartilage cells, cardiac cells and nerve cells. This is a promising sign of the advances in the treatment of many conditions using cord blood stem cells.

- **WHY SHOULD I STORE CORD BLOOD STEM CELLS NOW? IF THEY ARE NEEDED IN THE FUTURE WHY NOT TAKE THEM FROM BONE MARROW?**

Cord blood stem cells are very immature adult stem cells, and therefore have a greater ability to differentiate into other cell types. They have not been exposed to the many toxins and radiation we all experience in everyday life, and are therefore healthier. Cord blood stem cells are much more tolerant to HLA tissue mismatching than bone marrow, therefore leading to lower rates of graft versus host disease. They have a longer growth potential and have been

shown to have a greater rate of engraftment. Most importantly, collection of cord blood stem cells is painless and risk free to both mother and baby. Collection of bone marrow stem cells is very painful and there are certain risks associated with bone marrow collection.

- **I HAVE HEARD THAT A BABY'S OWN STEM CELLS ARE UNABLE TO TREAT CONDITIONS SUCH AS LEUKAEMIA BECAUSE THEY ARE GENETICALLY CODED WITH THE DISEASE. IS THIS TRUE?**

The treatment of leukaemia is complex and different approaches are undertaken depending upon various factors. Stem cell transplantation is often performed for the treatment of leukaemia. In many cases a specific stem cell donor is preferred but where a donor cannot be identified then use of the child's own stem cells is an accepted form of therapy. These are often collected during the course of treatment. However, if a child has cord blood stem cells stored then these could certainly be considered for use.

- **WHY SHOULD I COLLECT AND STORE WITH CELL SENSE AS OPPOSED TO ANOTHER PRIVATE COMPANY?**

Cell Sense is committed to ongoing research and development into the therapeutic uses of stem cells. Profits raised from the collection and storage procedure are directed back into stem cell research and application. It makes perfect sense to have your stem cells stored with a company who is dedicated to finding therapeutic uses and treatments with stem cells, rather than one who is not.

Cell Sense is dedicated to achieving the highest quality standard in all aspects of training, cord blood collection, data collection, transport, quarantine and storage. Our quality system and procedures have been designed to comply with the Human Tissue Banking laws and regulations.

Cell Sense only stores cord blood stem cells...that's our business!

- **WHY SHOULD I COLLECT AND STORE WITH CELLSense AS OPPOSED TO DONATING TO THE PUBLIC CORD BLOOD BANK (AUSCORD)?**

Stem cells are a precious commodity, otherwise discarded. Cell Sense encourages people to donate to the public bank if they choose not to privately store. However, the public bank offers a limited resource; often not providing a suitable match (especially within certain ethnic groups) nor being able to guarantee retrieval of a family's own stored stem cell sample if the need ever arose.

It is also important to note that AusCord only collects from a limited number of sites and collection is restricted by the availability of collection and processing staff, in many cases only during business hours. Cell Sense collection and processing is available 24 hours per day, 7 days per week.

- **IS STORING MY BABY'S CORD BLOOD STEM CELLS LIKE AN "INSURANCE POLICY" FOR THE FUTURE?**

The storage of your baby's cord blood stem cells cannot offer a guaranteed cure for any medical condition or disease. However, storing your cord blood stem cells with Cell Sense ensures these stem cells are immediately available should they ever be required.

- **AT BIRTH WHEN SHOULD MY BABY'S UMBILICAL CORD BE CLAMPED?**

In order to obtain a higher yield of blood for collection, it is suggested that your baby's umbilical cord be clamped and cut as soon as possible after the baby's birth. However, if you feel strongly about the cord being left unclamped and uncut until pulsations have ceased, this may be possible too.

- **WHAT LENGTH OF UMBILICAL CORD IS REQUIRED FOR THE COLLECTION OF CORD BLOOD?**

If the cord is cut and clamped nearest to the baby, allowing for a couple of centimeters in between (which is normal practice), this will allow for easier cord blood collection.

- **WHAT HAPPENS IN THE CASE OF A CAESARIAN, FORCEPS OR VACUUM ASSISTED BIRTH?**

The process of cord blood collection does not interfere with the birthing process nor with the safety of mother or baby, therefore there should be no problem.

- **WHAT HAPPENS IF MY BABY IS BORN PREMATURE?**

Prematurity is not an issue unless your baby is born less than 35- 36 weeks gestation. This is due to a typically smaller baby, and therefore smaller placenta, which does not normally allow for a sufficient yield of cord blood.

- **WHAT HAPPENS IF AN INADEQUATE AMOUNT OF CORD BLOOD IS COLLECTED?**

We aim to collect at least 35mls of cord blood, however we are usually able to collect much more. This amount of cord blood gives us more than sufficient stem cells to process and store for your family's future.

If less than 35mls of cord blood is collected, there are two (2) options:

Between 20- 35mls collected:

There is an option to have the sample analysed for numbers of stem cells. Often, despite a smaller yield of blood, there are actually an adequate number of stem cells, which can be processed and stored.

All kits will be returned to the processing laboratory to confirm volume, before

a decision is made regarding processing and storage.

Less than 20mls collected (or you choose not to take the above option):

We will be unable to process and store your cord blood, as the number of stem cells in this yield of cord blood is insufficient. Your monies, less the cost of the collection kit and costs incurred up to this stage will be refunded.

Again, all kits will be returned to the processing laboratory to confirm volume, before a decision is made regarding processing and storage.

- **HOW ARE STEM CELLS STORED?**

The stem cells themselves are stored in 'cassettes' in 'vapour-phase' liquid nitrogen at -196°C. Each cassette holds 20mls of stem cells.

If more than 60mls of cord blood is collected, there will always be two cassettes of stem cells stored. Each cassette can then be accessed at different times and may be used for different recipients.

If less than 30mls of cord blood is collected, there will be one cassette of stem cells stored.

- **I HAVE COMPLETED THE MEDICAL QUESTIONNAIRE AND ANSWERED "YES" TO A NUMBER OF QUESTIONS. DOES THIS MEAN MY BABY'S CORD BLOOD CANNOT BE COLLECTED AND STORED?**

The medical questionnaire is simply designed for a number of reasons:

- To alert us to potential medical conditions, which may affect the condition or viability of your cord blood sample.
- Some responses may provide important medical information for a doctor to consider, prior to using your baby's cord blood for transplantation.
- If 'YES' is answered to any of the 'critical' questions (Q12-19), the laboratory may request that you visit your local doctor and have a 'pre-collection' blood test. This is to minimise the risk of both couriers and laboratory staff handling contaminated blood.
- HIV positive blood cannot be privately banked.

Rest assured, a 'YES' response does not necessarily mean your baby's cord blood is not able to be stored. Any issue will be openly discussed with you at the time.

- **WHAT SCREENING TESTS ARE PERFORMED ON THE MATERNAL BLOOD SAMPLE?**

Samples of maternal blood are required for disease screening. The infectious diseases, which are tested for are; HIV, HTLV, Hepatitis B, Hepatitis C, Cytomegalovirus and Syphilis. The blood sample is also tested for the presence of bacterial contamination.

These tests are performed to ensure the safety of all stored stem cells and to ensure viability by being 'contaminant-free'.

- **CAN MY STORED STEM CELLS BE SOLD OR PASSED ON TO ANOTHER COMPANY?**

Your stored stem cells are being stored for your private use only. Under no circumstances will your cells be passed on to another individual organisation unless you request and consent to this in writing.

- **I LIVE IN A RURAL PART OF THE COUNTRY. CAN I STILL HAVE MY BABY'S CORD BLOOD COLLECTED AND STEM CELLS STORED?**

Living in a rural part of the country is not exclusion for having your cord blood collected and stored. Your cord blood will be transported to the laboratory at Sydney Adventist Hospital, depending on where you are located. There may be a small additional surcharge for distance. This will be discussed with you at the time of registration.

Research has shown that cord blood stem cells can survive for 48 hours under controlled temperature conditions. The Cell Sense transport container and the temperature stabilising elements have been specifically designed to maintain optimal conditions during transport. A temperature-recording device is included in every transport container, to monitor the temperature within the container during transport.

Transportation from most regional birthing hospitals can be achieved in less than 24 hours.

- **IS THERE AN ADDITIONAL SURCHARGE IF MY BABY IS BORN ON A WEEKEND OR PUBLIC HOLIDAY?**

Courier companies sometimes charge an extra fee for transport on weekends or public holidays. If your baby is born on either a weekend or public holiday Cell Sense will absorb the additional surcharge. Customers will not be charged the extra fee.

We hope this has assisted by answering some of the more common questions relating to cord blood collection and stem cell storage. If you have any further queries or questions, please feel free to contact our Customer Service Manager on:

1800 005 541 toll free or (03) 9541 9200.