

## Cord Blood and Tissue Fact Sheet

*Invest in your future health*

*The collection and storage of cord blood and cord tissue taken from the umbilical cord of a baby at birth is becoming increasingly common. Cells contained in the blood and tissue, have potential therapeutic value in the treatment of blood disorders, immune diseases and the emerging field of regenerative medicine.*



### Cord Blood



**The cord blood is rich in haematopoietic (blood forming) stem cells that are used to treat over 80 blood related diseases.** Cord blood is a valuable source of stem cells for a bone marrow transplant. Cord blood is collected immediately after the birth of your baby by your obstetrician or midwife. The umbilical cord is cut and clamped, a needle is inserted into the umbilical vein and blood is collected into a sterile collection bag. Cord blood collection is quick, safe and painless for both mother and baby.

### Cord Tissue



**The cord tissue contains mesenchymal stem cells (MSCs) which are stem cells that give rise to the connective tissues of the body i.e. skin, muscle, bone, cartilage, nerve and fat.** MSCs are being employed in research environments for a wide variety of aesthetic and medical conditions. Cord tissue is collected after the cord blood has been collected and the placenta has been delivered. A 10-15cm piece of umbilical cord is cut, cleaned and placed in a sterile collection tube.

## Cord Blood Uses

Of the 80 blood related diseases that stem cells are currently being used to treat, the most common are:

- Bone marrow cancers (leukaemia, lymphoma)
- Anaemias (sickle cell anaemia, thalassaemia, Fanconi's anaemia and aplastic anaemia)
- Immune deficiency syndromes
- Inborn errors of metabolism

Internationally cord blood is being researched for a number of diseases that currently have no cure:

- Cerebral Palsy
- Type 1 Diabetes
- Brain Injury
- Stroke
- Autism
- Auto-immune diseases
- Acquired hearing loss



## Cord Tissue Uses

Cord Tissue contains unique stem cells capable of differentiating into many different types of cells, as well as powerful anti-inflammatory properties. Internationally there are many clinical trials using MSCs from cord tissue:

- Skeletal injury (including bone, cartilage, muscle, tendon and ligament repair)
- Auto-immune disease
- Heart and vascular disease
- Gastrointestinal disease
- Diabetes
- Neurological disease and spinal cord injury
- Wound Healing
- Transplant complications (improving graft vs. host disease)
- Cosmetic uses



For more information on specific clinical trials visit [www.clinicaltrials.gov](http://www.clinicaltrials.gov)

## Why should one store both cord blood and cord tissue?

Cord blood and cord tissue contain different stem cells with different clinical uses and are therefore not interchangeable. Cord blood stem cells are needed for bone marrow transplants and new emerging therapies mentioned above. Cord tissue stem cells regenerate connective tissue.

## Who can use the Stem Cells?

The cord blood is a

**100%** 

match for your baby and

**25%** 

chance of being a match for a sibling.

## Why should I consider banking my baby's stem cells?

1. To date there over

**38 000**

cord blood stem cell transplants have been done.

2. Currently there is only a

**1 in 100 000**

chance of finding a matching bone marrow stem cell donor. The chance for patients of mixed ethnic descent is

**1 in 400 000**

3. Stem cells collected at birth are biologically younger than stem cells collected later in life and therefore have better regenerative potential.
4. Collecting stem cells at birth is less invasive than harvesting them later in life.

The Parent's Guide to Cord Blood Foundation provides a balanced overview of Stem Cell storage- visit- <http://parentsguidecordblood.org>