



## Information sheet for cord blood donation Public Cord Blood Bank

Dear expecting mother, dear parents

You will soon give birth and you are considering donating your child's cord blood. This information sheet will tell you all you should know about the collection process for cord blood and storage of your child's cord blood in a public cord blood bank (CBB).

### Introduction

The blood that remains in the child's umbilical cord and placenta after birth is known to contain a relatively large amount of potentially life-saving cells called blood stem cells. Blood stem cells from cord blood can be used for transplants to treat blood cancer (such as leukemia), other severe blood diseases or rare immunologic disorders. With a blood stem cell transplant, the patient's diseased blood and immune system is replaced by healthy new blood stem cells.

Cord blood can be collected from the umbilical cord and placenta after delivery of the child and clamping without any risk for yourself or your child. Cord blood storage in a public cord blood bank makes the donated blood stem cells available for the treatment of all patients requiring blood stem cell transplantation worldwide. The probability that the donated cord blood will be used for an unrelated recipient depends on the unit's HLA characteristics and their compatibility with those of the recipient.

Storage of blood stem cells from cord blood has the following advantages:

- The collection process is safe and risk-free for mother and child
- Cord blood can be easily frozen and stored for a practically unlimited length of time (cryoconservation) without the cells losing their potential
- Cord blood is rapidly available for treatment (transplantation)
- Blood stem cells from cord blood are less likely to cause transplant rejection than other types of blood stem cells, hence the necessity of compatibility (HLA-matching) between donor and recipient is less stringent than for blood stem cell transplantations with bone marrow or peripheral blood stem cells

However, the quantity of blood stem cells in a cord blood unit (CBU) is limited; therefore, cord blood is preferably used for children as the quantity may not be sufficient for a transplant in an adult.

Cord blood donation is voluntary, anonymous and non-remunerated.

### Requirements for donation

A medical evaluation is required before donation in order to ascertain the health of mother and child, and to assess donor eligibility and thus to protect the recipient from transmissible diseases.

This entails:

- Filling in a medical questionnaire on the state of health and medical history of the mother and father. The questionnaire also includes questions on known diseases or disorders in the family, which could be transferred to the recipient via the cord blood. The medical questionnaire should be filled in before the onset of active labour. A cord blood collection can only be performed if all the eligibility criteria are met

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- Signing an informed consent form before cord blood donation
- Excluding transmissible viral or bacterial infections. For instance, it is mandatory to test for HI-Virus, Hepatitis-B- and -C-Virus and Syphilis (Screening-Tests)

However, in the initial period of an infection, an infectious disease may not be detectable and could be transmitted to the recipient of the cord blood stem cells. It is therefore of the utmost importance to mention any risk situation and fill in the medical questionnaire truthfully.

Should the screening tests reveal any abnormal results, you would be informed immediately. Of course, you have the right to view all the test results.

Apart from the usual screening tests mentioned above, samples of the maternal donor's blood and of the child's cord blood are stored for later analysis (such as haemoglobinopathy testing), which may be necessary in the context of transplantation.

All data collected in context with a cord blood donation are pseudonymised and are solely available to qualified staff, which is bound to medical confidentiality. "Pseudonymised" means that the name will be replaced by a pseudonym (generally a multi-digit letter or numeric code) to make it impossible to determine the identity of the person concerned.

## How is cord blood collected?

The cord blood stem cells are collected from the residual blood, which remains in the placenta and the umbilical cord after delivery of the child and clamping. A minimum amount of cord blood is necessary for further processing and banking. Unfortunately this amount is not always reached.

The cord blood collection is performed by the qualified staff caring for the mother during delivery. The collection is performed under sterile conditions to minimise the risk of contamination and infection of the unit and in order to ensure the highest possible quality and safety of the future transplant product.

**The care for mother and child always has first priority. A cord blood collection does not interfere with the birth process.**

In rare cases, it may turn out that a planned cord blood collection is not advisable or not possible, notably in critical medical situations such as a premature delivery or an emergency.

## Storage of the cord blood unit

The collection, processing and storage of cord blood units for public banking are performed according to the international quality standards of FACT-NetCord (International Standards for Cord Blood Collection, Processing, Testing, Banking, Selection and Release). In Switzerland, these standards are only implemented in a limited number of maternity units which is why cord blood collections for public banking are only possible in these clinics (see list below). The cord blood unit is then registered in the Swiss Transfusion SRC database and is available for patients worldwide.

Should the cord blood you donated not fulfill the quality requirements and therefore not be suitable for clinical use, it will either be discarded, or, in certain centers - with your consent - it can alternatively be used for quality control tests in the cord blood bank, or for scientific research projects.

By voluntarily donating your child's cord blood, you will transfer the ownership of the donated cord blood unit to the public cord blood bank.

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## Costs

You will bear no costs for the collection and storage of the donated cord blood.

## Genetic tests on the recipient after transplantation

After transplantation, the recipient undergoes genetic testing in order to monitor the function of the transplanted blood stem cells, or - on the other hand - to follow the initial disease. In very rare cases, these tests could produce results that may be relevant for the child. You will be informed, if the cord blood bank is apprised of any such results.

## Duty to supply information post donation

Certain illnesses or infectious diseases, as yet unknown at the time of donation, can pose a risk for the recipient of a cord blood unit. Any health problems occurring in the perinatal period or later in your child's life could affect the quality of the unit and the safety of the future recipient. The cord blood bank must be informed of any such health issues. The parents are requested to contact the cord blood bank or the maternity unit should this case/situation arise.

## List of clinics in Switzerland where cord blood donation for public banking is possible:

- Kantonsspital Aarau
- University Hospital Basel
- University Hospital Bern
- University Hospital Geneva
- At the following 6 maternity clinics in Tessin:
  - Ospedale Regionale - Civico, Lugano
  - Ospedale Regionale - Beata Vergine, Mendrisio
  - Ospedale Regionale Bellinzona e Valli - San Giovanni, Bellinzona
  - Ospedale Regionale - La Carità, Locarno
  - Clinica Sant'Anna, Sorengo
  - Clinica Santa Chiara, Locarno

If you are considering a cord blood donation, these hospitals can provide further information.

The two public cord blood banks in Switzerland are located at the University hospitals of Basel and Geneva.

## Link

[https://www.blutspende.ch/de/blutstammzellspende/blutstammzellspender\\_werden/wenn\\_es\\_zu\\_r\\_spende\\_kommt/wie\\_spende\\_ich\\_blutstammzellen/nabelschnurblutspende](https://www.blutspende.ch/de/blutstammzellspende/blutstammzellspender_werden/wenn_es_zu_r_spende_kommt/wie_spende_ich_blutstammzellen/nabelschnurblutspende)

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