

Stem Cell Banking and Diagnostics



Why store stem cells?



What are stem cells?

Stem cells are unique from all other kinds of cells in the body. These special cells help us grow, develop and can heal illness and injury by regenerating into new and different types of cells.

Today, Hematopoietic stem cells found in cord blood are used to treat over 85 life-threatening conditions. In addition, there are more than 1,000 clinical trials using Mesenchymal stem cells, found in cord tissue, for an array of diseases such as diabetes, heart disease and cerebral palsy.

It is widely accepted that around 1 in 3 people will benefit from stem cell therapy during their lifetime.

Storing your child's own stem cells ensures not only a 100% match for them, but due to the shared genetics there is also a high potential of a match for your family. Having stem cells stored also ensures that the cells are readily available at the time you need them most.

Why store stem cells?

- ◆ 85 diseases treated
- ◆ 1,000+ clinical trials
- ◆ Privately stored stem cells guarantee a match
- ◆ Chance of a match for immediate family
- ◆ Immediately available if needed

Cord blood and tissue stem cells

As with all cells, stem cells deteriorate over time. Banking stem cells at birth provides not only assurance that the cells are completely naïve and of the best possible quality, but also gives an additional opportunity for the future. Both cord blood and cord tissue contain types of stem cells, each with their own unique properties and potential.

Cord blood stem cells (Hematopoietic stem cells / HSCs) are collected from the blood in the umbilical cord after the birth. HSCs are a specialised cell that can develop into all types of blood cells. The ability to develop into white blood

cells is particularly important, as these cells make up our bodies essential immune systems. There are an array of diseases, such as leukaemia, anaemias and lymphomas, where the white blood cells in the body mutate or deplete causing life-threatening illness. By developing and regenerating white blood cells, stem cells can treat these diseases in a less invasive way and more effectively than ever before.

Cord tissue stem cells (Mesenchymal stem cells / MSCs) are found in the tissue of the umbilical cord itself. These naïve cells can be directed to transform and become specialised cells that are found in the body such as bone, cartilage tissue and muscle cells. This means MSCs have huge potential to treat a vast array of illnesses because they have the ability to regenerate areas and tissues that are malfunctioning using a range of mechanisms.

Currently research is taking place into the treatment for common illnesses including autism, alzheimer's and parkinson's.



Why do parents choose to store privately?



Each parent has a unique reason to store stem cells. After 18 years, we have noticed some common themes:

Innovative insurance

Many parents understand storing stem cells from birth is a once in a lifetime opportunity, it is a novel and unique way to ensure their children have access to the most advanced stem cell therapies in the future.

Family illness & regenerative medicine

History of family illness is a common reason for storing stem cells, whether there is a history of blood cancers, diabetes, arthritis or heart disease, stem cells could provide an answer to future generations facing these ailments.

Chance of a match

Finding a suitable sample for treatment could be a one in a million chance, particularly for those of mixed or minority ethnic backgrounds. Storing stem cells for your baby guarantees a 100% match as well as a high chance of match for siblings and other family members. For those families where adoption or donor ovum/sperm has been used, often medical history is somewhat unknown and it can be extremely difficult to access a biologically matching sample making stem cell banking even more important.



Cord blood standard therapies

- ✓ Anaemia
- ✓ Bone marrow cancers
- ✓ Inherited disorders
- ✓ Leukaemias
- ✓ Leukodystrophy disorders
- ✓ Lymphomas
- ✓ Solid tumours



HSCs clinical trials

- ✓ Autism
- ✓ Crohn's disease
- ✓ Cerebral palsy
- ✓ Diabetes Type 1
- ✓ HIV
- ✓ Lupus
- ✓ Multiple sclerosis
- ✓ Sickle cell anaemia



MSCs trials

- ✓ Alzheimer's disease
- ✓ Aplastic anaemia
- ✓ Liver failure
- ✓ Lung Injury
- ✓ Multiple sclerosis
- ✓ Parkinson's disease
- ✓ Stroke





7 things to know

The Parent's Guide to Cord Blood Foundation defines 7 key considerations when choosing a cord blood bank.

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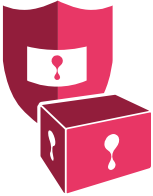
Stability



We privately own and operate an on-site laboratory in the UK and two storage facilities in the UK and Switzerland, and have done so since our inception. These facilities allow us to remain at the forefront of stem cell technology. We follow the industry-approved volume reduction processing method for all samples, ensuring safety and a cell recovery rate of up to 99% pre-freeze.

4

Insurance



From insurance policies to on-site surveillance, it gives you peace of mind to know that your sample is fully secure. Our storage vessels are monitored 24/7 in real-time using our temperature monitoring system, backed by a team of on-call scientific officers.

6

Accreditations



One of the most important factors to consider is whether your chosen stem cell bank is fully licensed and accredited by the relevant regulatory bodies. We are one of the most accredited banks in the world, holding MHRA and AABB accreditations, GDP certification and licences from Swissmedic, HTA, OFSP, ISO-9001 and FCA. To ensure we are continuously meeting standards, we comply with each accreditors regular audits in addition to performing our own, maintaining the Future Health standard.

1

Experience



118

Experience is a good indication of competence in any stem cell bank and ours is second to none. We are the UK's most experienced cord blood bank, releasing 118 samples for treatment in our 18 year history.

3

Inventory



200,000



100,000

We currently store over 200,000 stem cell samples for over 100,000 families - more than all other UK stem cell banks. 118 of these have been released for treatments so far. All samples are stored at our dedicated storage facilities, which are fully regulated and accredited. We own two storage facilities in Nottingham, UK and Switzerland.

5

Shipment



24/7

If you ever need your sample, transportation and shipment is totally free of charge anywhere in the world. We use our own medically approved courier to transport samples directly, 24/7.

7

Pricing



For cord blood and cord tissue banking, we provide three main price packages: Standard, Premium and Premium+, all including a one-off setup fee and a small annual storage fee. We also offer a choice of up to 12 months interest free finance.

Why are processing methods so crucial?

The higher the stem cell count, the better quality the sample, as this is what determines viability at time of transplant. Cord blood banking is an intricate process, not just freezing blood. Red blood cells can be harmful when thawing a sample, so it is necessary to separate the different types of cells in the sample before cryopreservation (freezing).

What does my cord blood sample contain before freezing?



Red Blood Cells (RBCs)
Composition: **40 – 45 %**
Value: **No therapeutic value**



Buffy Coat
Composition: **5 – 10 %**
Value: **High therapeutic value; contains key stem cell population used for treatment**



Plasma
Composition: **50 – 55 %**
Value: **Limited therapeutic value**

To preserve the valuable buffy coat, we use our specialised systems that have been uniquely designed to achieve the highest cell recovery rate possible. To implement the volume-reduction method, a careful and delicate process of separating the elements, we are required to use both the best of modern technology and utilise the expertise of our in-house scientific officers within our laboratory. Our system can be manipulated to maximise the cell recovery for each individual sample and we never process

multiple samples simultaneously, as some other stem cell banks may choose to do.

Where some stem cell banks may find it more efficient to perform viability tests only sporadically, it is important to us that each and every sample must undergo viability testing.

This guarantees that if a sample is stored with us, it is viable.

Impact of shipping

Our processing method is not only unique to us but begins from the minute the cord blood is collected. Our focus is based on minimising any risk to the sample whilst in transit, as we fully understand damage cannot be recovered, even by the best systems, once it reaches a laboratory.

Our kit components have been carefully selected following years of experience, each with its own important function to preserve your stem cells. Together, you are provided with a bespoke system to ensure maximum protection in transit. Components include:

- **Anti-microbial tablet dramatically reduces the risk of contamination to your cord tissue sample and is unique to Future Health.**
- **Nano-cool® engine refrigerates the sample, keeping it at a constant ideal temperature, protecting the stem cells from any deterioration.**
- **Data logger to monitor the controlled temperature and to confirm the temperature has remained stable and is received at optimal temperature.**

Our dedicated medical courier collects your samples and on average, delivers them to our laboratory within 24 hours.

Services



We are dedicated to providing the best prices for the most diverse service opportunities.

Every cord blood and tissue package includes:

- **First year of storage**
- **Sample collection kit**
- **Account set up**
- **Dedicated medical courier**
- **Maternal blood testing**
- **Full viability testing**
- **Free release and shipment**
- **Sample storage for multiple uses**
- **Physical, financial and cyber protections**

By choosing Future Health, exclusive services become available to you with the same guaranteed quality standard as cord blood storage. Any service can be added to build a package that suits you:

Additional cord tissue storage

- Store more segments of cord tissue for more future potential.

ABO (blood type) testing

- Find out your child's blood type from your cord blood sample.

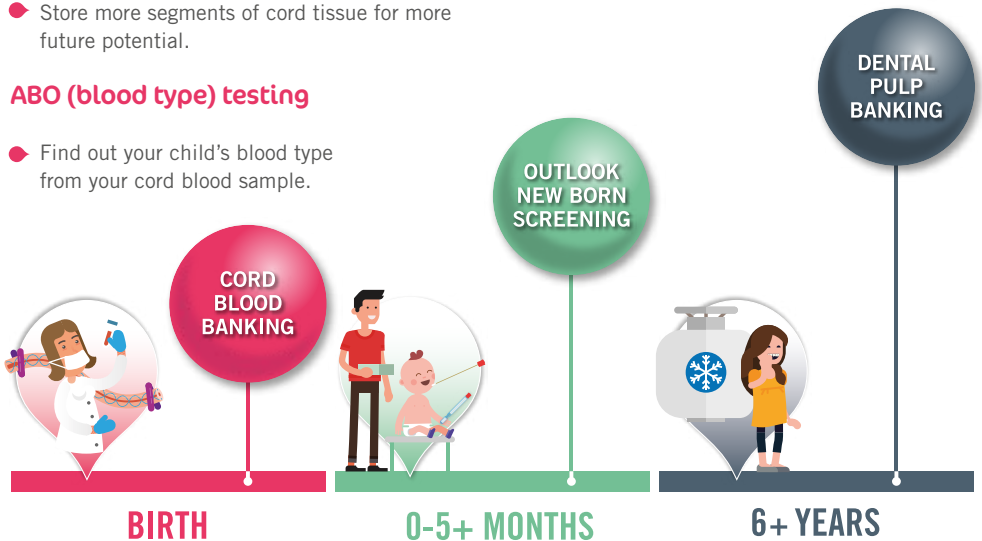
Outlook new born screening

- Our dietary screening test identifies if your child is at risk of developing 4 conditions that can impact those early years of feeding, including lactose intolerance and coeliac disease.

Dental pulp stem cell banking

Families choose to store tooth stem cells to maximise stem cell samples available to their children or if they are seeking a non-invasive collection procedure after missing the opportunity to store at time of birth.

- MSCs found in tooth stem cells are widely regarded as a significant part of healthcare advancement and are present in **1,000** studies and **50,000+** scientific publications.
- We are proud to be the world's largest tooth stem cell bank.



To find out more about our services, get in touch or visit us at www.futurehealthbiobank.com

What makes Future Health unique?



UK's largest and most experienced bank

We have collected and processed over 200,000 samples for more than 100,000 families worldwide. We are one of the world's most accredited stem cell banks and regarded by our peers as the most innovative, highly considered centre of excellence for quality and service within the stem cell banking industry.



More samples released than any other UK bank

118 samples have been released from our storage facilities for use around the world including the UK, Europe, the Middle East and USA.



Multiple samples stored

All of our samples are stored in several units to ensure you have the potential of future multiple use. We are the only UK bank to offer up to 9 segments of cord tissue, revolutionising families' potential ability to access more treatments for more family members in the future.



Highest cell recovery rate

Our state-of-the-art processing technology recovers the maximum amount of stem cells possible in your sample, giving your child the best chance of successful treatment in the future.



Flexible payment plans

Having a baby is an expensive time. We help to lighten the load by offering interest-free payment plans over 6 or 12 months.



Free release worldwide

We are the only UK bank to include free release and shipment of our client's samples worldwide for both certified treatments and clinical trials.



Comprehensive services

All of our services and packages can be tailor-made to suit your family's needs, whether you want to take advantage of our diagnostic tests or to store extra portions of samples for future potential, we have more options available to you than any other UK bank.



Guaranteed refund

You will only be charged for successfully processed and stored samples. Although rare, a sample that does not contain a viable amount of stem cells will not be stored. In this event you will be refunded for the processing and storage cost of that sample.



Our price promise

We take pride in offering excellent value for money on our stem cell banking services. If you find a cheaper price for the same service in the UK, let us know and we promise to beat the quote.

Samples released



We are proud to say that we have released more samples than any other UK bank. Having released **118** samples for clinical application from a diverse range of stem cell sources including cord blood, cord tissue and tooth stem cells.

Clinical applications we have released samples for include:



- ◆ Aicardi-Goutières Syndrome
- ◆ Autism
- ◆ Cerebral palsy
- ◆ Cleft Palate Repair
- ◆ Diabetes Type 1
- ◆ Diabetes Type 2
- ◆ Diamond Blackfan Anaemia
- ◆ Fanconi's Anaemia
- ◆ Genetic Analysis
- ◆ Regeneration of Knee Cartilage
- ◆ SCID (Severe Combined Immunodeficiency)
- ◆ Thalassemia Major

Sample release case study

One of our most recent released samples was to treat a three-year old girl for cerebral palsy, using her baby brother's cord blood stem cells.

After finding out about the pioneering clinical trials into cerebral palsy at Duke University, USA, the family decided to release the cord blood sample for potential treatment. It took less than a week for her sample to be released and received by Duke University Hospital, where the stem cells were successfully infused.

The girl's mother said that despite extensive research into potential treatment, this stem cell infusion was the family's only viable option.

She spoke to Future Health about her experience in storing with us:

'We heard about Future Health on the internet after a lot of research online. All of the services provided were an excellent experience. Professional staff, very available, fast answers by email and phone, very pleasant, efficient and paying close attention to your needs.'

What do I do on the day?



Over the years, we often hear of client's relief that although the science behind the service can be complicated, the process for them is so simple.

We know that on the big day your focus will need to be on the wellbeing of you and your baby. That is why we have simplified our collection process so there is minimal impact on you:

1. Call us to arrange your chosen service
2. Receive your collection kit
3. Simply take your kit to the hospital with you
4. Update your phlebotomist so they can attend the hospital in time for your birth (they won't come into the room during delivery)
5. The phlebotomist will complete the collection
6. Once they leave, just text 'COLLECT' to your dedicated medical courier



Support

To support you through the process, we contact your hospital and remain on hand to guide you through every step so that you are ready for the big day. We make sure to provide clear and detailed instructions for the collection on your booking confirmation, which you can refer to for every detail on the collection process.

Once your child's stem cells have been collected, we take care of all shipment, sample processing and storage. We keep you up to date, issuing your initial results within 7-10 days.

Delayed cord clamping

As more research highlights the benefits of delayed cord clamping, it is common myth that cord blood collection is not compatible and can prevent your baby from benefiting from both.

In fact, only a fraction of the available umbilical cord blood is required to bank cord blood cells and the collection does not interfere. If you are opting for delayed cord clamping and stem cell banking, both opportunities are very much available to you.

Please call us to discuss your individual birth plan requirements.

What are my storage options?



STANDARD PACKAGE

- Cord blood or cord tissue processing

PREMIUM PACKAGE

- Cord blood processing
- Cord tissue processing

PREMIUM + PACKAGE

- Cord blood processing
- Cord tissue processing
- Outlook screening test

To give parents the widest choice possible, several different storage packages are available. Choose from the Standard package (cord blood or cord tissue only), the Premium package (cord blood and cord tissue), or the fully comprehensive Premium+ package (cord blood, cord tissue and Outlook screening test).

PRICE PROMISE**

If you are offered a cheaper price for a comparable service elsewhere, just let us know and we promise to beat the quote by **£50**.

**T&C's apply, visit our website for details.

CLIENT 10% DISCOUNT

when you enquire and tell us where you found our leaflet!

Visit our website www.futurehealthbiobank.com, email us at custcare@fhbb.com or call us on **01159 677 707** for our latest prices.

Next steps



Get in touch

We'll discuss with you your chosen plan



We send your agreement

Once your package is tailored to you, we create and send you the agreement to sign



Pay an initial fee

An initial fee is required to cover the set up of your service, you can also choose to spread your balance payment into up to 12 monthly instalments



We send your collection kit

Arranged courier delivery within 24 hours or on your chosen delivery date



We allocate your healthcare professional (if required)

In some cases, your private consultant or midwife may be able to collect for you



We write to your hospital to inform them of your request

This ensures everything goes smoothly on the big day

Hear from parents who made the choice:



Peace of mind

Future Health were fantastic to work with, so easy and accommodating. Also very understanding when things don't always go to plan. We got made to feel like we mattered and the collection was easy and successful. One of those investments that you hope to never use but feel reassured that it is available if you do!

Saartje

Family illness

If umbilical cord stem cell storage had existed when I was born, it would have eliminated my wait to find a donor and reduced the effects of the stem cell transplant caused by the donor's rather than my own cells. I cannot recommend the services of Future Health Biobank enough. As my son and daughter-in-law are expecting their first baby, cord blood banking was a no brainer and the most amazing Christmas present I could have gifted to them both.

Pauline

Potential to match a sibling

Once I'd done my research I decided this was the right option for us, mainly because I wanted to be sure that I'd given my children a fighting chance if they were to ever get sick. I think this is the best possible gift you could give a child. And even though I missed out with my first born, I know that there is a possibility that my daughter's stem cells could even help her brother.

Michelle

Providing every chance

There were so many reasons why we opted for this insurance policy we hope to never use. I have personal experience on how this treatment could have helped me throughout a few of my big injuries as a

professional athlete. Opting to bank his cord blood cells means that we know we are giving him every chance physically in life to overcome adversity should he need it.

We were so impressed by Future Health's professionalism and the phlebotomist they sent when I gave birth was both incredibly efficient and empathetic to the emotions we were going through in the last stages of birth and I hardly noticed her presence at all.

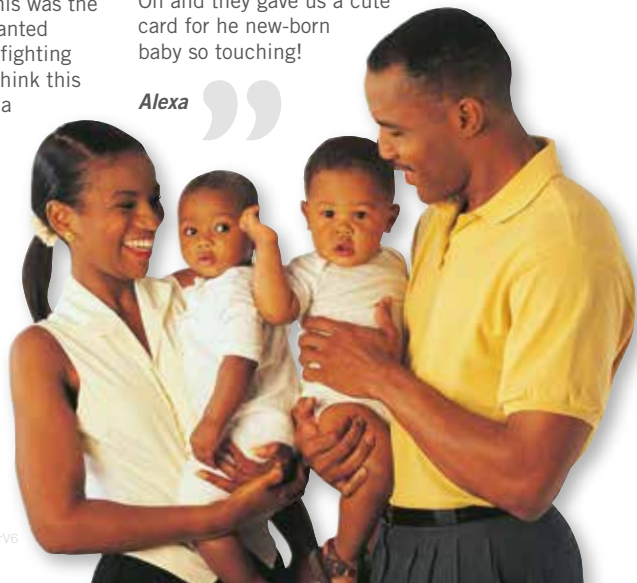
Chemmy

Easy and affordable

We were quite late when reach for their service. However, they were very quick and efficient in their respond and set up everything within a day. I got the kit next day. Also they did have really good price match and finance service. On the actual day there's this lady who came to cut the cord but due to my complications she had to wait 10 hours. Was real pleasure dealing with them very professional.

Oh and they gave us a cute card for he new-born baby so touching!

Alexa





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