

baby talk

THE NEWSLETTER
FOR MOTHERS

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cordlife 
one chance one choice

So,
WHAT
ARE YOU PLANNING TO
DO WITH YOUR BABY'S
CORD BLOOD
TODAY?

THE ROLE
OF FOLATE
DURING
PREGNANCY

FETAL
MOVEMENT





editor's note:

At CordLife, we constantly challenge ourselves by asking, "What do expecting parents want to know, and what are their concerns?" To find out, we consulted with health care professionals, pregnancy subject matter experts and even parents with extensive experience.

Baby Talk newsletter is a resource dedicated to providing you answers to questions that expecting parents would have and have asked. From topics on romance during pregnancy to some of the reasons why parents choose to save their baby's cord blood or perhaps you may be wondering about your baby's fetal movements. We created these articles because you asked. To this end, if there is a topic you would like to see included in our next newsletter, we would love to hear from you! Please write to us at editor@cordlife.com.

baby talk

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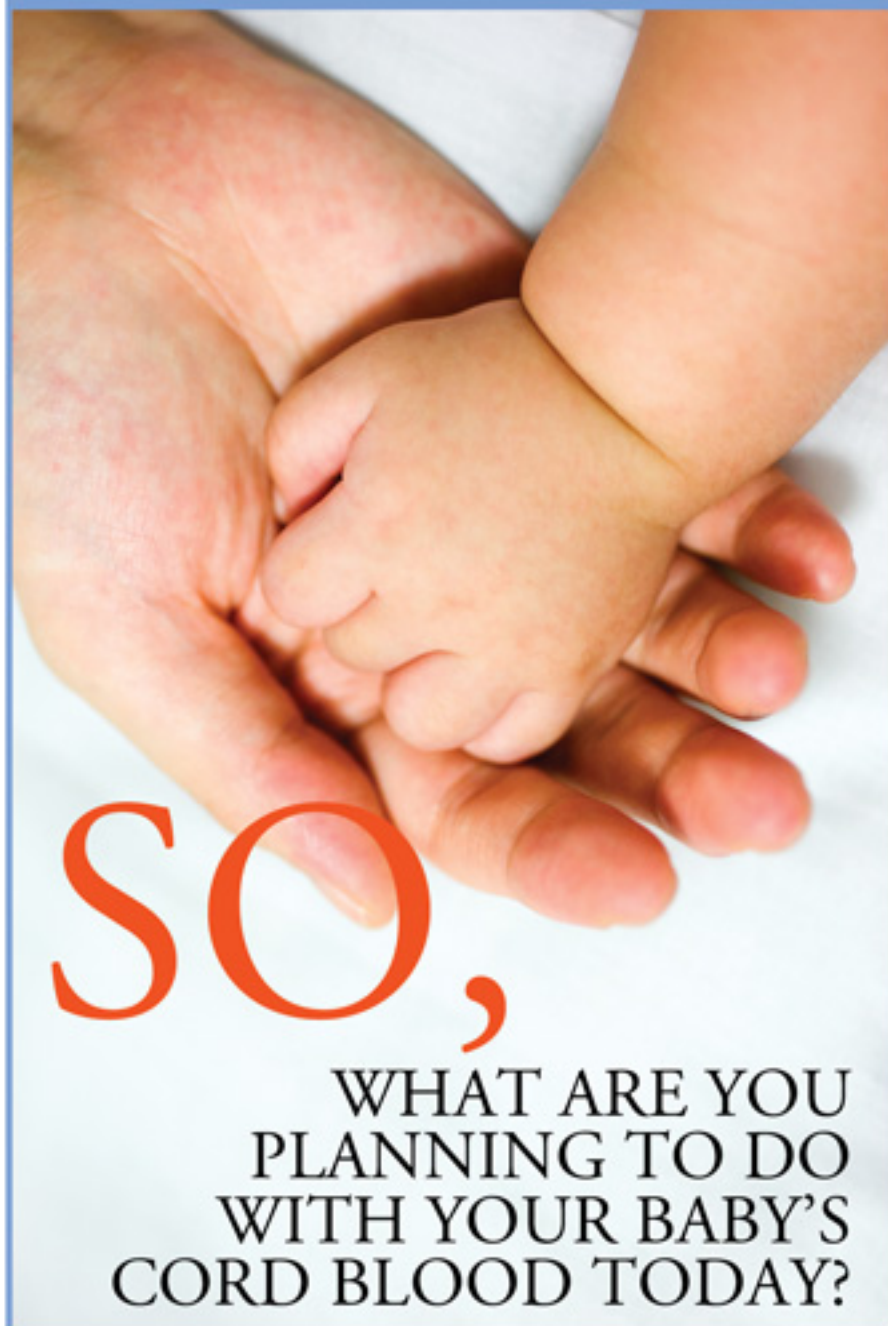
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If you've heard about cord blood banking, you may be wondering what's so special about a baby's cord blood...

The answer - stem cells, which have the ability to treat an ever-growing list of diseases.

You may have heard that the stem cells in your baby's cord blood can help to save lives, but if you are like most people, you have only a vague notion of how stem cells work, or which diseases they can treat. Right now, certain cancers, blood disorders and immune disorders, among other conditions, have been successfully treated with cord blood stem cells, and thanks to ongoing cord blood research, the list of diseases that may be treated by these stem cells may continue to grow.

Why is it important to know about cord blood research and what types of diseases it can treat? Knowing the uses of cord blood and its limitations may help you decide whether you wish to store your baby's cord blood privately, or maybe donate it.

Here are some facts that you should keep in mind as you consider:

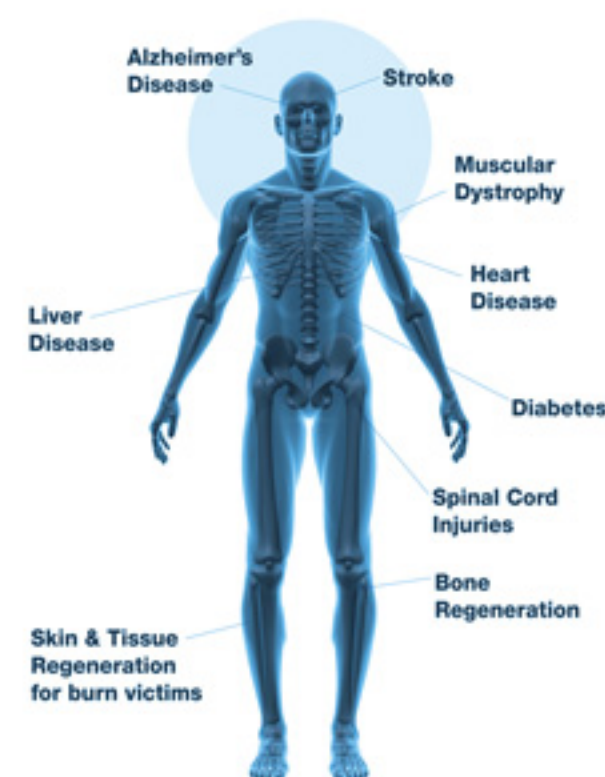
Cord Blood Basics

Cord blood is the residual blood in your baby's umbilical cord immediately after birth, which your obstetrician/gynaecologist will collect in a quick, easy, risk-free and painless procedure. Cord blood contains a very rich source of hematopoietic (blood) stem cells. And these blood stem cells have the ability to develop into other types of specialized cells in the blood and immune system, and replace or repair damaged cells in the body.

There are other sources where stem cells can be found too. Like bone marrow and peripheral blood, stem cells from these sources are also used for transplantation and treatment. However, cord blood is often perceived as a preferred choice because it does not require a match to a patient's tissue type as closely as opposed to donated bone marrow or peripheral blood.

In fact, today, cord blood seems to be the preferred choice by many physicians around the world for transplantations and treatments in pediatric (children) cases for certain diseases such as cancers, blood disorders, bone marrow failure syndromes, metabolic disorders, immune system deficiencies and other inherited disorders.

"Experimental trials suggests that cord blood stem cells may be able to treat auto-immune diseases."



Benefits Today

Currently, there are 80 diseases that can be treated with stem cells. They include:

Cancers

including cancer of the blood-immune system (leukemia), those of the lymph system (lymphoma), bone marrow cancer (multiple myeloma), cancer of the eye (retinoblastoma) and those of the nervous system (neuroblastoma).

Blood Disorders

including many forms of anemias, which are deficiencies or malformations of red blood cells necessary for carrying oxygen to the body.

Bone Marrow Failure Syndromes

or deficiencies in the bone marrow. These include red-cell aplasia (a condition in which bone marrow lacks red blood cell precursors) and severe aplastic anemia (when bone marrow doesn't produce enough new cells to replenish blood cells).

Metabolic Disorders

which are a result of abnormal chemical reactions in the body that disrupt the way it processes energy from food. These conditions include Gaucher's disease, Hunter syndrome and Hurler syndrome.

Immune System Disorders

which prevent the body from fending off infections, such as X-linked immunodeficiency and severe combined immunodeficiency (also known as 'bubble boy' disease).

Other inherited disorders such as osteoporosis

If you have a family member who has a disease which is treatable with cord blood now, cord blood research shows that transplants from related donors are more successful than ones from non-related donors. Still, experts are divided as to how likely your baby will need his own cord blood to cure a disease he may develop in the future. This is due to the fact that many diseases which affect the blood and immune system (and might be helped by cord blood stem cells), already exist in your baby's cord blood. So, for example, if your child has a genetic form of lymphoma, his cord blood may contain that same genetic mutation and would not be a feasible transplant option.



Cord Blood Research: Future Treatments

What does the future hold for cord blood? Preliminary and promising research through clinical and experimental trials suggests that cord blood stem cells may be able to treat auto-immune diseases such as type 1 Diabetes Mellitus; as well as cerebral palsy, Parkinson's disease, brain and spinal cord injuries, stroke, cardiovascular disease, liver disease, kidney disease, and breast cancer, among other illnesses.

So, what are you planning to do?

Remember that cord blood banking is proving to be a rich source of life-saving treatments; now and in the future, as the possibilities of cord blood continue to expand. As an expectant parent, the choice is now yours. To find out more about cord blood and its utility, visit www.parentsguidecordblood.com for an independent view today.





Why

WE CHOSE TO BANK OUR BABY'S CORD BLOOD

By Mdm Virginia Goh

Our Story

When I was expecting my second child this year, I had a discussion with my husband, who is a medical doctor, on our options of storing our child's cord blood again.

Our older son, Vincent, was born in November 2005. After doing numerous research at that time, we found out that it was important to store our child's cord blood as cord blood stem cells act as an 'insurance policy' should we need to use them later on. There are many childhood illnesses which can be treated by using these stem cells.

"It is important to store your child's cord blood when you deliver and it is always better to store in a private cord blood bank if you can afford to do so."

At that time, we opted to donate to the public bank. However, like a charity donation, we naturally will not have ownership of the cord blood. It would instead be released, for a fee, to anyone who needed it. We learnt the cost could come up to S\$26,000 for a cord blood unit and that it excludes matching costs. Having said this, we don't regret doing this act of charity, as it would benefit others.

Why Private Cord Blood Bank?

For my second pregnancy, we decided to store our baby's precious cord blood with a private cord blood bank instead. This is because when we store our second child's cord blood in a private cord blood bank, we are definitely assured that the cord blood unit belongs to us, and the cord blood from our second child may also be used by his older brother if need be, subject to a matching test, of course.

Choosing a private Cord Blood Bank

Once we the decision to store our child's cord blood in a private cord blood bank, we started looking at some key factors recommended when choosing which cord blood bank to go with.

After researching, we found that most parents and subject matter experts shared the following criteria:

1) Financial stability - Coming from a finance background, I am always concerned about how financially sound an organisation is, so that I am assured that it will be around for the next 20 years and even more. A badly managed cord blood bank may go bankrupt and you may lose your cord blood if that happens. In this aspect, we prefer a public-listed company where the accounts are more transparent and are subjected to more stringent, independent checks from auditors. A private cord blood bank with strong financial background and is also transparent about their financial statements which are made easily available to the public, is an important criteria to us.

2) Accreditation - External accreditation by independent organisations is important. This is to ensure that the private cord blood bank is safe, reliable and has good quality control, with the quality badges to prove it. An accredited private cord blood bank will give us greater assurance as this shows that they are competent and uncompromising in meeting high standards required by the governing bodies that award the accreditation to them. This actually gives us a peace of mind that we know we can entrust something so precious and important to them.

Advice to parents

It is important to store your child's cord blood and it is always better to go with a private cord blood bank if you can afford it. In my opinion, private cord blood banking is really affordable to many parents nowadays. The storage fee is about \$250 per year, over a period of 21 years. Singaporean parents like us can now utilise the Children Development Account (CDA aka Baby Bonus) to pay for this service.

Storing your child's cord blood is one of the routine procedures most parents are undertaking now, just like bringing their child for vaccination, as both cord blood banking and vaccination act as an 'insurance' to protect your child's future.

Mdm Virginia Goh
Director of Consulting Service (Healthcare and Education), and a university lecturer. Author of the book 'Picking the Right Hospital, Right Doctor in Singapore'.

She has stored her baby's cord blood with CordLife, an accredited private cord blood bank in Singapore.



Teoh Kai Wei Videll

FETAL MOVEMENTS

Dr Abdul Aziz
Obstetrician & Gynaecologist, and Woman's Specialist
MBBS (Singapore) 1983, MRCOG (UK) 1989

From the moment you know that you're pregnant, it is natural that you will anxiously wait for your first ultrasound scan to see the little bundle of joy growing in your tummy for the very first time. If your scan is done after 8 weeks, you can even see your baby's subtle, tiny wriggly movements and hear his or her heartbeat. However, it is only when you actually feel your baby's first movement inside of you (called "quickening"), he or she will then seem more real rather than just an ultrasound image.

Fetal movement refers to the motion of a foetus caused by its own muscle activity. Muscles begin to contract as soon as they are innervated. These first movements are not reflexive, but are arise from self-generated nerve impulses originating in the spinal cord.

As the nervous system matures, muscles can move in response to stimuli.

Variations in activity level

Foetuses aged between 14 to 18 weeks show a pronounced circadian rhythm in their activity level, i.e. day and night variations. Active and quiet periods of the foetus do not correspond to those of the mother's; foetuses are most active from 9am to 2pm and again from 7pm to 4am. Before 24 weeks, the baby's movements will be few and random; there may be days when he or she moves a lot and other days when you do not feel any movement at all. Despite the way it seems, the baby is moving and kicking all the time. It is only in the late second trimester, the baby's movements will develop into a more regular pattern. Fetal movements generally begin to fall into patterns of activity around 24 to 26 weeks, and these patterns will usually continue until the day of the delivery or sometimes a few weeks before the delivery. Each baby has his or her own sleeping cycle and there are certain times in a day, he or she will typically move more. You can actually take note of your baby's active periods to identify whether the baby is a morning, afternoon or night baby.



“Fetal movement is the best indicator of a healthy pregnancy”

Monitoring fetal movements - “Kick-counting”

After “quickening”, which was mentioned earlier, you may start to count the number and types of movements you feel that your baby is making. This tally is informally known as “kick-counts”. The advantages of conducting kick-counts include giving a pregnant woman the opportunity to bond with her baby and reducing the risk of stillbirth.

Counting the baby's kicks is simple. Use these easy steps, which most obstetricians recommend, starting around 24 to 26 weeks of your pregnancy, especially if you have a high-risk pregnancy: Once a day, simply choose a specific time when the baby is usually most active. Sit down in a comfortable position. Note the time it takes for the baby to have 10 movements (kick, twist, flutter, turn, etc, but not hiccup). Most babies usually take less than 30 minutes. By doing so regularly, Mum gets to know her baby's movement pattern. If the baby is taking longer than usual or if there is a significant change, counting may be repeated after taking some juice, walking for a few minutes or lying on Mum's left side (which maximises blood flow to the fetus) to gently stimulate the baby physically.

Notify your doctor or midwife if the baby is taking longer than usual, if there is a significant change or if there are fewer than 10 movements in two hours.

Counting kicks doesn't require a doctor's supervision. Feel free to count kicks on your own and get to know your baby's habits. It is good to have a baseline of which you can compare with if the baby's movements change later on. Keeping track of your baby's movements can also help to ensure he or she is strong and healthy.

Of course, kick-counting is not all foolproof. Remember to trust your own instincts about your baby as well. If you feel that there is something not quite right, call your doctor immediately or go to the nearest hospital. Your instincts are usually correct and should be checked out to ensure the safety of both mother and child. Generally, your doctor will ask about your baby's movements during each visit: How often do you feel the movements? If there have been any changes? So on and so forth. So why are all these information so important to both the doctor and yourself? Your doctor only sees you once every two to four weeks. Fetal movement is the best indicator of a healthy pregnancy; if the baby is not growing well, he or she will probably slow down his or her activities way before stopping all movements eventually.



Monitoring babies with slow movements

Not all doctors will ask for formal monitoring on fetal movements. More often than not, most mothers will complain about how much discomfort their babies have been giving them because of 'aggressive' fetal movements. Most mothers who have high-risk pregnancy are given specific instructions for counting and monitoring of fetal movements. They may be subjected to more detailed monitoring, such as foetal heart rate monitoring (cardiotocogram, CTG), ultrasounds (biophysical profile) and umbilical cord Doppler testing. It is undoubtedly that mothers who have low-risk pregnancy will also benefit from monitoring of their fetal movements.

Truths & myths

about Romance During Pregnancy

Dr Peter Chew
Obstetrician & Gynaecologist, Gleneagles Hospital
Founder Chairman of aLife



“Doctor, I am having morning sickness almost every other day. I feel quite tired and have no interest in getting intimate with my husband, but he feels otherwise. What should I do?”

This was what Mel*, 28, a first-time mother at 9 weeks of pregnancy, asked me the other day during her second antenatal visit.

Many couples like Mel and her husband are apprehensive about sexual intimacy during pregnancy, especially if it is their first pregnancy. According to some studies, about 70% of women say that pregnancy tends to be accompanied by a decrease in sexual desire, while the remaining 30 % feel that pregnancy may be a period of carefree and uninhibited sexual indulgence. Some women may feel less confident of their figure and looks during pregnancy, hence, shy away from lovemaking. Others on the other hand, may desire sexual contact more often as a reassurance of their partner's love and of his attraction to their pregnant body.

Sexual desire also varies in different phases of pregnancy. During the first trimester, tender breasts, nausea, vomiting and fear of miscarriage may cause a decreased libido. However, in some, increased blood flow to the pelvic area may heighten sexual arousal.

In the second trimester, many women have increased sexual desire as the fear and fatigue that they had previously experienced in their first trimester would have subsided. In the third trimester, libido decreases again as many women feel uncomfortable during intimacy because of the enlarged womb. Some may feel unattractive because of the physical changes and worry that sex may harm the baby or bring on premature birth. Sexual desire in men is likely to change as well.

Some men feel closer to their wives and enjoy the physical changes during pregnancy. Others may experience decreased desire because of the risk of miscarriage and premature birth. Sexual activity during a normal pregnancy is usually harmless. There is no evidence to suggest that it causes miscarriage or premature birth, although some women may experience prolonged and sustained uterine contractions during orgasm. This is due to the release of prostaglandin, a chemical substance found in seminal fluid.

Sexual intercourse during pregnancy will not hurt the baby as he or she is well cushioned in the water bag (amniotic sac). There are also layers of strong muscles in the womb protecting the baby. In addition, there is a thick mucus plug that seals the neck of the womb (cervix) and prevents infection. In any case, the penis does not come into contact with the baby during sex. The only risk is if the husband is infected with a sexually transmitted disease (STD) such as Hepatitis B, AIDS, or Herpes. In these instances, sexual intercourse during pregnancy poses the risk of transferring the infection to the baby.

There are, however, certain conditions in pregnancy when couples are advised against sexual intimacy. They include:

- Bleeding during pregnancy
- History of repeated miscarriages
- History of premature birth
- High risk of premature birth (e.g. excessive amniotic fluid)
- Laxity of the neck of the womb

Having sexual intimacy during pregnancy is a very personal decision. Everyone has different feelings as well as sexual desires. The final decision rests with the couple themselves.

**Names mentioned in this article have been changed.*



Polycystic Ovary Syndrome: How can it affect you?

Dr Beh Suan Tiong

Senior Obstetrician & Gynaecologist, Thomson Medical Centre
MBBS (Singapore), MRCOG (UK), FAMS

Polycystic ovary syndrome (PCOS) is a relatively common hormonal disorder and is estimated to affect about 5% of females in the reproductive age group. It is associated with three important characteristics:

1. Problem with ovulation (releasing eggs from the ovaries), and as a result, menstrual disorders
2. Evidence of the effect of excessive androgen (male hormone)
3. Ultrasound features of polycystic ovarian disease

The presence of any two of the above characteristics suggests the diagnosis.

This problem is usually associated with many hidden abnormal, hormonal and metabolic changes in the body that are yet fully understood.

Symptoms

The presence of the following is suggestive that you may have PCOS:

1. Infrequent and irregular periods
2. Difficulty in conceiving
3. Excessive oily skin, acne and hair growth
4. Weight gain

The first two symptoms are the typical reasons why patients turn up to visit a gynaecologist while the last two may lead them to consult a dermatologist, family doctor or even an endocrinologist.



Who can be affected?

This disease can strike early, starting from one's teenage years or later in life. A typical patient tends to be heavier in weight with infrequent menses and with or without acne. It is not unusual for an adolescent or teenager who just started to menstruate, to have rather infrequent (once every few months) periods. However, this should become more regular after 2 to 3 years. If the infrequent periods persist, it is advisable to seek medical opinion.

If a patient is trying to conceive, it may take a longer time to succeed or even not at all, hence, leading many women to visit a gynaecologist for the first time in their lives.

Although the above describes the usual manifestation, there is a group of patients who are of normal weight with only mildly disturbed menses. This latter group usually needs blood tests and/or ultrasound scans to help in the diagnosis.

The Hidden Risk

This seemingly 'quiet' disease may be associated with a host of medical problems that affect a woman's entire life. Firstly the menses is less frequent, with intervals of 6 weeks or more, but some may take a few months or even a year. This is due to the fact that ovulation does not take place regularly. It is because of the infrequent ovulation, infertility or problems in conceiving become

another issue for women who wish to start a family. There may also be an increased risk of miscarriage. Due to the metabolic problems associated with this hormonal disorder, the patient is more prone to develop diabetes, high cholesterol or lipids, and together, predispose her to higher risk of cardiovascular diseases like coronary artery disease. It is exacerbated if obesity is present as well. A further hidden danger is the risk of developing endometrial cancer in patients who do not menstruate regularly for a long period of time. Endometrium refers to the inner lining of the womb which normally sheds off during menses. When menstruation fails to happen, this lining will continue to grow and if the situation is allowed to continue for long periods of time, the cells in the lining have a higher chance of turning into cancer.

What can be done?

Understanding the existing and potential problems is important to both the patient and doctor so that appropriate treatments and/or preventive measures can be advised.

Lifestyle changes

Many patients are overweight and both exercise and dietary control are important lifestyle changes that they should adopt to lose weight effectively and to sustain it. Losing sufficient weight helps in their ovulation problems and leads to better menstrual control, which indirectly tackles fertility issues. Weight loss, as commonly known, helps in combating diabetes and heart diseases as well.

Regulation of menses

If one's menses is very irregular, it is better to take some medication to help due to the danger of developing cancer. This is commonly in the form of oral contraceptive pills or progestins. Oral contraceptive pills that contain cyproterone acetate or disperidone are particularly helpful as they may reduce the excessive androgen effect, e.g. improve acne.

Fertility enhancement

Patients who have trouble conceiving may need medication to help them to ovulate. The treatments can range from simple weight loss programs and oral medication to expensive injections and surgery, e.g. laparoscopic ovarian drilling. In-vitro fertilisation may be needed as well in some situations.

Preventive measures

As there is a greater risk of developing diabetes, patients should be tested for it, e.g. going through an oral glucose tolerance test when they are older, especially if weight is also an issue. There are some suggestions of the use of metformin, an old but useful medication for diabetes, and in cases of PCOS, it helps the body to increase its sensitivity to insulin. It may help in ovulation as well, although that remains controversial.

Conclusion

It is important to recognise PCOS and seek early diagnosis and treatment. Because of its long-term health risks, attention should also be paid on preventive management to minimize the potential harm. This will benefit the patient's reproductive health.



The role of folate during pregnancy

Kindly contributed by Annum.

Angela Rowan, MSc (Hons), Registered Nutritionist (NZ)

Recent studies suggest a new benefit of folic acid supplementation during pregnancy on cognitive development. Folate requirements increase substantially during pregnancy; 50% relative to that for non-pregnant women. The most compelling reason to ensure that women who are planning pregnancy and during early pregnancy, consume adequate folate is to reduce the risk of Neural Tube Defects (NTDs)¹ and other birth defects such as cleft palate.

The South East Asia Region committee of WHO highlighted folate deficiency as one of the nutrient deficiencies of emerging global public health importance in 2000². Evidence from studies conducted amongst women of childbearing age in Asian countries suggests that folate consumption is lower than the recommended intake and that folate deficiency is prevalent.^{3,4}

Neural tube defects are a group of birth defects caused by the failure of the neural tube to close properly around 28 days post conception. Anencephaly and spina bifida are the most common types of NTDs accounting for over 80% of these defects in most countries.⁵ Folic acid taken around the time of conception and through early pregnancy will substantially reduce a woman's risk of having an NTD-affected pregnancy or an infant with oral cleft defect. All women planning a pregnancy should ensure that they receive additional folic acid (~400 µg/day) from supplements or fortified foods. Consuming milk fortified with folic acid is a good way to increase folic acid intake; a strategy that has been shown to substantially increase blood folate concentrations in women of childbearing age to levels known to reduce the risk of NTD.⁶



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CordLife operates Asia Pacific's largest network of private cord blood banks with full processing and cryopreservation storage facilities in Singapore, Hong Kong, Indonesia, India, Philippines, and an association with the two largest public/private cord blood banks in China, as well as marketing presence throughout the region. CordLife is listed on the Australian Securities Exchange since 2004.

In a short span of almost 10 years, we have grown to become the leading cord blood bank which thousands of parents have chosen to trust.

CordLife collects, processes and stores cord blood stem cells which may later become a potential source for life-saving treatments. We provide families with high quality and standard in processing and storage services to protect their children's precious cord blood stem cells.

Since our inception in 2001, we have established a rigorous quality system and track record of clinically reliable cord blood banking service that was certified by Singapore's Ministry of Health. Most importantly, we have also achieved an accreditation by the world's most recognised gold standards in cord blood banking – American Association of Blood Banks (AABB), and have successfully achieved the accreditation the third time consecutively.

10 Years of Quality
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one chance, one choice.

**We know how precious
your baby is to you.**

Do you know how precious cord blood is to your baby?

Today, over 80 diseases including certain cancers and blood disorders¹ may be treated with your baby's cord blood. You only have one chance to collect your baby's cord blood at birth – it could be a lifesaving decision for your little one and your family.

Give your child the best gift. Make the right choice with CordLife.

Call 6238 0808 or visit www.cordlife.com/sg for more details.

Reference: 1. 'Parent's Guide to Cord Blood Banking' and 'Cord Blood Registry' website. (www.parentsguidecordblood.org), (www.cordblood.com)
2. Lee, HC 2010, 'The stem-cell hope', The Straits Times, 2 December, p.12.



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Do you know?

“Stem cells, which have the potential to develop into some or all of the specialised cells in tissues and organs provide hope that they can replace damaged cells².”

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