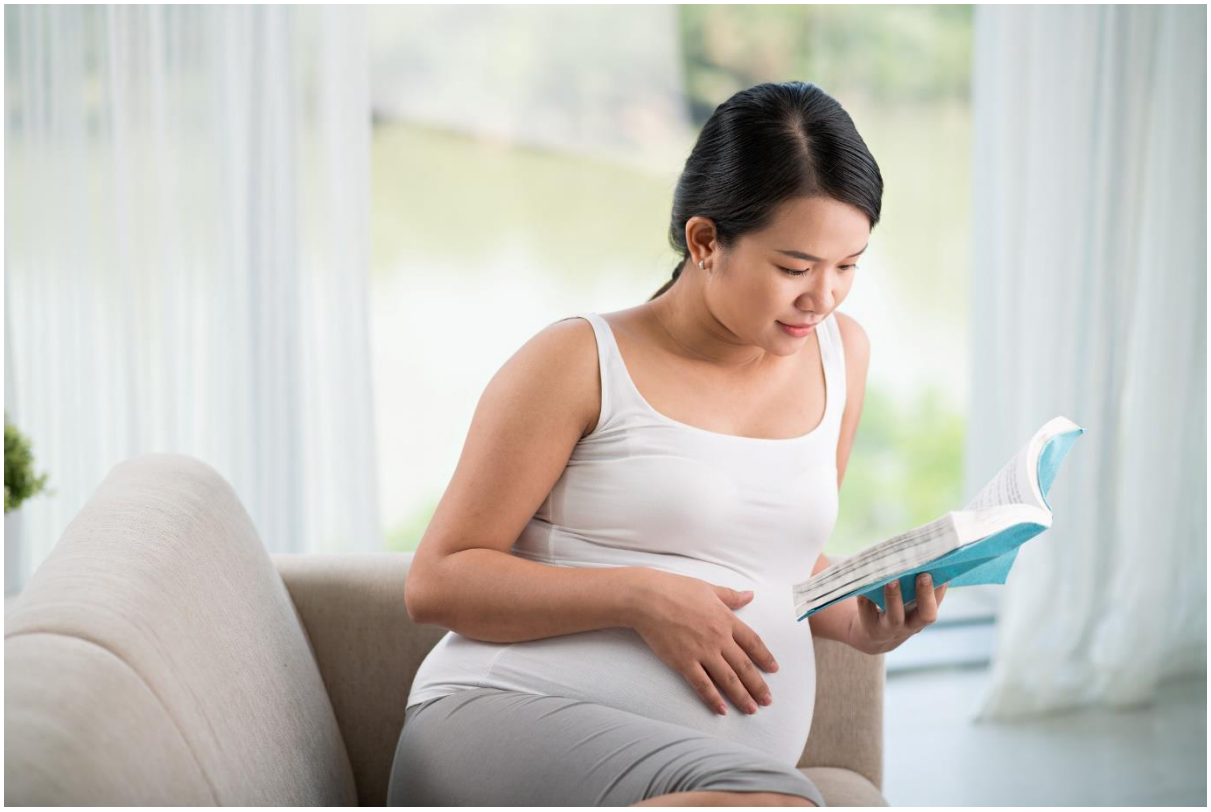
Guide 6: Pregnancy Issues Some Women Might Face

While pregnancy and delivery tend to be smooth sailing for most women, there are some issues that all expectant mothers and their partners should be aware of.



Although most women will enjoy their pregnancy without much difficulty, some women might have health problems that arise during pregnancy, while others may have had prior health problems that could lead to complications in pregnancy. It's always good to know about these potential areas of concern in order to be better prepared. The best advice is to see your doctor if you have any concerns. Your healthcare practitioner is the best person to advise you on the best course of action.

First Trimester Bleeding

This refers to vaginal spotting or bleeding that occurs in the first 12 weeks of pregnancy. Any pregnant woman who experiences first trimester bleeding should seek medical advice, especially if it's persistent, or if she's experiencing abdominal pain at the same time. Most times it's insignificant, but occasionally, bleeding in the first trimester could be caused by a miscarriage or an ectopic pregnancy (where the embryo implants into the Fallopian tube after fertilisation). A doctor will be able to provide further advice after an assessment.

Thalassemia

This is an inherited blood disorder that occurs in almost 4 percent of our local population. It's passed from parent to child and can affect both males and females. An affected person suffers from anaemia (low blood count). Thalassemia has a range of clinical manifestations depending on the number of abnormal genes inherited.

Thalassemia minor occurs when a person inherits one thalassemia gene — he or she may have mild anaemia, but otherwise will be able to lead a healthy life.

Thalassemia major is a severe form of anaemia, and occurs when two thalassemia genes are inherited, one from each parent. The risks of thalassemia major include miscarriage, or severe anaemia that requires regular blood transfusions, poorer growth and development and a shorter life span.

Since thalassemia can be passed on from one generation to another, both partners should always be screened either before trying for a family, or once pregnancy is confirmed. The screening test involves a simple blood test, and results usually take a couple of weeks.

Down Syndrome

Down Syndrome is a common genetic chromosomal disorder and cause of learning disabilities in children. It's caused by abnormal cell division, resulting in extra genetic material from chromosome 21. It can vary in severity, but usually causes lifelong intellectual disability and developmental delay. The risk of having a baby with Down Syndrome increases with the mother's age.

There are methods to test for Down Syndrome and these are divided into screening and diagnostic tests.

Screening Tests

These tests classify your pregnancy into low or high risk, and are not diagnostic. This means that if the screening tests show that there's a high risk of your baby being affected, you will be offered a diagnostic test to confirm the results. Screening tests are non-invasive, and hence provide a safe way to proceed and determine if more invasive diagnostic tests are required.

First Trimester Screening (FTS)

This screening test is performed in the first trimester and encompasses a detailed ultrasound scan between 11 and 14 weeks gestation, which measures the thickness of the skin at the back of the baby's neck, as well as blood tests for markers for Down Syndrome. A risk ratio is calculated incorporating the mother's age, and the ultrasound and blood test results. Its detection rate is 90 percent.

Maternal Serum Screening (MSS)

This measures certain hormones in your blood in the second trimester of pregnancy to determine your risk of Down Syndrome as well as two other conditions: Trimsomy 18 (Edward's Syndrome) and Neural Tube Defects. A risk value is calculated using the mother's age and blood test results, to an accuracy of 65 percent.

Non-invasive Prenatal Testing (NIPT)

This is a blood test that measures the placental DNA within your blood. The resuIt serves as a proxy for the foetus' DNA and has an almost 99.9 percent accuracy, but is not a diagnostic test. Your doctor will be able to give you more information with regards to its use and efficacy.

Diagnostic Tests

These tests obtain cell samples from the baby and can tell to almost 100 percent accuracy if the baby is affected with Down Syndrome. It is only performed for patients deemed to have a high risk after preliminary screening tests. Diagnostic tests are invasive procedures, and carry inherent risks of miscarriage.

Amniocentesis

Down Syndrome can be diagnosed early in pregnancy from 15 – 20 weeks gestation by amniocentesis. A very fine needle is passed into the womb under ultrasound guidance, to take a sample of the amniotic fluid (water bag). The results will be available within two to three weeks. The procedure is performed on an outpatient basis, taking about 10 to 15 minutes. Most women don't find the procedure too uncomfortable.

Chorionic Villus Sampling (CVS)

This is performed between 11 to 13 weeks gestation. Similar to amniocentesis, it is also performed under ultrasound guidance. A very fine needle is passed into the placenta to withdraw placental cells. This can be performed either through the mother's abdomen or through her cervix.

Intrauterine Growth Restriction (IUGR)

IUGR refers to babies who are smaller than they should be at their gestational age. The most common cause is a problem in the placenta, impairing the delivery of nutrition and oxygen to the baby. Smoking, excess alcohol consumption, birth defects, genetic disorders and poorly controlled medical conditions such as hypertension in pregnancy may cause IUGR.

Once this problem is detected, further ultrasound examinations will be undertaken to measure the amniotic fluid levels and blood flow supply to the baby. The baby's heartbeat may also be monitored regularly.

About 60 percent of small babies are so because of their genetic make-up, and have no resultant health issues. The ultimate timing of the baby's delivery depends on how well the baby is coping inside the womb. If the environment inside the womb is deemed too unsafe for the baby, delivery may be expedited, either via induction of labour or a Caesarean section.

Macrosomia (Big Baby)

This occurs when the birth weight of the baby is 4.5kg or more. Those at risk are pregnant mothers with poorly controlled diabetes or those with a history of big babies in their previous pregnancies. The main concerns associated with a big baby include:

- A prolonged or arrested labour that may result in a Caesarean section delivery
- A difficult delivery and the possibility of the baby's shoulder getting stuck in the birth canal (shoulder dystocia). An obstetric emergency manoeuvre will be required to deliver the baby, which may injure the baby or severely damage the mother's perineum
- An increased risk of post-delivery bleeding
- An increased risk of maternal trauma from the birth process

Abnormal Amniotic Fluid Levels

The amniotic fluid, which is the fluid in the water bag (amniotic sac) that surrounds the baby inside the womb, is maintained by the balance between the production of the baby's urine and the swallowing of the fluid by the baby. It forms a protective environment for the baby.

There are two conditions to be aware of:

Oligohydramnios (too little amniotic fluid)

It may be caused by:

- Structural defects in the baby's urinary system causing reduced urine production
- Intrauterine growth retardation (IUGR)
- Rupture of the amniotic membranes, resulting in leaking amniotic fluid

Risks of oligohydramnios depend on its underlying cause and the gestation at which it occurs. The amniotic fluid is important for the development of the foetus' limbs and lungs. If oligohydramnios occurs at less than 20 weeks gestation, it may result in limb deformities and lung underdevelopment. Management is also based on the underlying cause and gestational age. Close monitoring via assessment of foetal movements, ultrasound scans and foetal heart monitoring may be required.

Polyhydramnios (too much amniotic fluid)

There are numerous causes for this condition including:

- Uncontrolled diabetes in pregnancy
- Conditions impairing the foetus' ability to swallow
- Twin-to-twin transfusion in twins with a single placenta (monochorionic twins)

Risks of polyhydramnios include:

- Pressure symptoms resulting in the mother's discomfort and breathlessness
- Premature labour due to the over distension of the womb
- Risk of cord prolapse or abruptio placentae (separation of the placenta from the womb)
- Risk of post-partum haemorrhage (excessive bleeding after the delivery of the baby)

Pre-eclampsia

This condition is characterised by the development of high blood pressure associated with protein in the urine from week 20 of pregnancy onwards, and may even occur up to six weeks postnatal. Patients who develop this condition may experience sudden swelling of limbs, a severe headache, reduction of urine output, or even gastric pains.

In milder cases, anti-hypertensives may be prescribed to lower the blood pressure with close monitoring of the pregnancy. In severe cases, complications such as kidney and liver failure may ensue; most patients will need hospitalisation for observation, and may even require an earlier delivery.

Antepartum Haemorrhage (Bleeding)

This refers to vaginal bleeding when the baby reaches viability (>24 completed weeks of pregnancy). Any pregnant woman with antepartum haemorrhage needs to be assessed by a doctor for conditions such as a low-lying placenta (placenta previa), premature separation of the placenta (placental abruption) or preterm labour, all of which require immediate medical attention.

Preterm Labour (PTL)

This happens when the pregnant mother goes into labour before 37 completed weeks of pregnancy. For some, the symptoms may be subtle and the contractions can feel like mild menstrual cramps or even a backache. Anyone suspected of being in preterm labour will likely be admitted to hospital for observation, and may be given medications to help prolong the pregnancy.

Twin Pregnancies

The frequency of twin pregnancies is one in every 80 pregnancies. One-third of twins are identical while the rest are non-identical.

Identical (monozygotic) twins

One egg is fertilised by a single sperm but divides into two embryos soon afterwards. Both twins have the same genetic material and will have the same sex with perfect resemblance. They can be housed in one water bag (amniotic sac) or two separate water bags.

Non-identical (dizygotic) twins

Two separate eggs are fertilised by two separate sperm. The genetic make-up of both twins is different and they may not be of the same sex. Each twin will have its own placenta and water bag.

Carrying twins may give rise to more complications compared to a singleton pregnancy. Mothers carrying twins are more prone to develop high blood pressure and diabetes in pregnancy. The pregnancy may also be at increased risk of miscarriage, growth restriction and preterm labour, among others. Another reason why twins are at a higher risk of being delivered preterm is that some twins that share the same placenta are recommended to be delivered at around 34 to 36 weeks.

Triplets and Higher-Order Multiple Pregnancies

In vitro-fertilisation (IVF) and other assisted reproductive programmes can cause multiple pregnancies to occur more often. The risks mentioned in twin pregnancies are multiplied in such

pregnancies. The risk of preterm delivery is extremely high and most triplets are delivered at about 35 weeks gestation. They will usually have to stay in the neonatal intensive care unit after delivery due to low birth weight and prematurity.

Group B Streptococcus (GBS) Infection

This is not a sexually transmitted disease, but very common bacteria that can be found in the rectum or vagina of up to 30–40 percent of all pregnant women. Sometimes, an infected mum-to-be can pass GBS to the baby during delivery, which may cause a serious brain infection and other issues.

A swab test of the vagina can be carried out between weeks 35 and 37 to detect the presence of GBS colonisation. Women with a positive test swab or who have certain risk factors will be administered antibiotics through a drip during delivery to prevent the baby from becoming infected.

Bell's Palsy

This is a sudden, unilateral facial weakness without a detectable cause. It usually occurs between the ages of 15 and 45 years and is two to three times more common in women than men. It's also more likely to occur in pregnant women, normally either two weeks before or after delivery.

It is believed to be caused by the inflammation of the facial nerve resulting in one-sided weakness of the face, leading to facial drooping on the affected half. There may also be excessive tear flow or a reduced sense of taste.

Most patients recover without intervention. About 5 percent of patients make a full recovery within 6–12 months. However, 10 percent of patients may have partial residual facial weakness and 5 percent may experience severe facial weakness.

Instrumental Delivery

This refers to the use of a vacuum or forceps instrument to assist vaginal delivery. It is an aid to facilitate natural birth. The mother's cervix needs to be fully dilated (10cm), the baby's head adequately descended, and the mother needs to be pushing cooperatively before either instrument can be used. The doctor will decide which instrument is more suitable at each circumstance.

How a forceps delivery is conducted:

Two forceps blades will be inserted into the vagina around the baby's head. They appear like large salad spoons and they are specially designed to fit comfortably around the baby's head. As the mother pushes during each uterine contraction, the doctor will deliver the baby's head by applying some traction on the forceps blades.

How a vacuum delivery is conducted:

A vacuum cup is placed on the baby's scalp and a vacuum is then gently created using a pump attached to the vacuum cup. The vacuum resembles a plunger. As the mother pushes with each uterine contraction, the doctor will gently guide the baby's head out using the vacuum cup.

When does it become necessary to use an instrumental delivery?

- When the mother is too tired to push effectively to deliver the baby

- When the mother has been pushing for more than two hours
- The baby's condition has deteriorated and an instrumental delivery is the most suitable for an immediate delivery

Episiotomy

An episiotomy is a clean cut of the mother's perineal tissue with a pair of sterile scissors. Local anaesthesia is first administered, and the cut is made when the baby's head is about to deliver (known as "crowning"). The decision to make an episiotomy depends on the doctor's discretion, and it aims to facilitate vaginal delivery, and reduce any perineal tears.

Zika

The Zika virus infection in humans has been reported since the 1950s. It is transmitted by the Aedes mosquito, and is identical to dengue. Only about one in five infections are symptomatic. Zika is generally a mild and self-limiting illness. Although rare, serious neurological complications have been reported. There is no vaccine or specific anti-viral drugs.

Most people infected with the Zika virus do not develop symptoms. Otherwise, symptoms usually develop within three to 12 days after the mosquito bite and are similar to those of dengue and chikungunya. Symptoms often last between four and seven days and include:

- Fever
- Rashes
- Joint pains, muscle pain, headache
- Conjunctivitis (red eyes)

Zika in Singapore: On 28 August 2016, the Ministry of Health (MOH) confirmed a localised community spread of the Zika virus infection in Singapore. Given that the Zika virus is spread by the Aedes mosquito vector, MOH cannot rule out further community transmissions in Singapore, since some of those who tested positive live or work in other parts of the country. As such, vector control remains the mainstay in reducing the spread of Zika.

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Sources:
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