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Miscarriage Article

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Miscarriage: What is miscarriage, what causes it and what options are there for women who suffer from recurrent miscarriage?

Fertility Specialist and Miscarriage Expert, Dr Gavin Sacks shares his insight.

Making the decision to start a family can be a daunting but exciting time in a couple's lives as they prepare themselves for the change, challenges and joy that comes with having a baby.

But few are prepared for the shock and loss one feels following a miscarriage. Broadly defined as pregnancy loss prior to 20 weeks, miscarriage is very common. Approximately 15 per cent of all pregnancies end in a miscarriage and 25 per cent of women who become pregnant will experience at least one.

Although people react differently after a miscarriage, it can be highly distressing for women and their partners. Firstly couples need to take time to come to terms with their loss. They may feel emotions such as emptiness, anger and disbelief, disappointment and sadness.

In addition a woman's body may be experiencing hormonal changes as it adjusts to the loss of the baby, this may compound her emotional state.”

“However, these are all perfectly natural responses and grieving is an important aspect of dealing with the miscarriage.”

A woman experiencing a miscarriage may notice vaginal bleeding, pain or tenderness around the abdominal area, or the feeling of being 'pregnant' disappears. For example she may no longer feel tender breasts or experience nausea or vomiting.

Following a miscarriage, a woman's ovaries will usually produce an egg about two weeks later, and a period should occur within four to six weeks. Physically, it is recommended that she allow a month or two before trying to conceive again, to give her body time to recover. Fortunately, for the majority of women who experience miscarriage, the genetic jigsaw fits together better the next time and a subsequent pregnancy is perfectly fine.

By looking at the complex process that needs to occur to achieve a successful pregnancy however, it is not surprising that sometimes it fails to occur perfectly. A chromosomally normal egg needs to join with normal sperm. Then the genes

on the chromosomes need to mix in a fashion that allows the embryos to successfully implant into the uterus and grow.

There are two main types of miscarriages; the single or sporadic miscarriage, and repeated miscarriages, which is commonly referred to as recurrent miscarriage. Miscarriages become recurrent when a woman has experienced three or more before 20 weeks into the pregnancy. It affects 2 in every 100 women. In some instances, woman can miscarry up to 10 or 15 times before success.

The good news is, a woman who has suffered a single sporadic miscarriage has an 80 per cent chance of her next pregnancy being successful, and a woman with three consecutive miscarriages has a 60 per cent chance.

When couples are faced with the disappointment of a single or recurrent miscarriage, it can be an isolating experience, and they often question why this is happening to them. The simple answer is that often there is no single cause for miscarriages. However one of the main causes is a chromosome abnormality in the embryo, which is nature's way and is out of the woman's control. It is also known that with advancing age the random chromosome abnormalities become more common and therefore the risk of miscarriage increases. This is particularly important for women over 35 years of age and of major importance in those over 40.

Other known causes discussed in more detail later in this article are uterine abnormalities, immune causes, blood clotting disorders, endocrine factors and hormone imbalances.

However in many cases, there is no reason at all, which is known as unexplained miscarriage, and so women with unexplained recurrent miscarriage may be referred a fertility specialist clinic where ongoing research into new theories and treatments, may help these category of women.

IVFAustralia's Miscarriage Care program is designed to provide assistance to couples who have experienced the distress of miscarriage and it has three main components.

These involve undertaking initial investigations into recurrent miscarriage, providing prospective care in a subsequent pregnancy. It also offers the patient the opportunity to take part in miscarriage research IVFAustralia is undertaking into the immune mechanisms of miscarriage.

In addition, IVFAustralia recently launched the first Australian research program to investigate the effect of natural killer cells, as the most numerous white blood cells found in the uterus during pregnancy, on pregnancy particularly in women with recurrent miscarriage and unexplained infertility.

Women who are suitable to be involved in this research may have already had tests for other reason, but to no avail.

## Investigations

### Chromosomal Abnormalities / Parental Abnormalities

One of the main causes of miscarriage is either chromosomal or genetic abnormalities, which occur naturally as part of the random nature of eggs and sperm joining. About 60 - 70 per cent of embryos lost in the first 12 weeks show major chromosome abnormalities. These are usually random events that are unlikely to reoccur.

In a small percentage of couples one of the partners carries a chromosome abnormality that if passed on will cause the fetus to be abnormal. In the carrier this may not cause any obvious problem, as the chromosome defect is 'balanced' by other normal chromosome material. Testing of the couple's chromosomes can be performed with a blood test.

### Uterine abnormalities

For the embryo to implant normally the uterine shape is of importance. Abnormalities in the shape of the uterus such as septum can be associated with miscarriages. Fibroids may also be a cause of pregnancy loss especially if they extend into the uterine cavity or if they are large. These abnormalities can be easily detected and treated by a fertility specialist.

### Immune Causes

The human immune system can form antibodies that can interfere with normal establishment of the placenta. A blood test can be performed to detect such antibodies and specific treatments can be instituted if warranted.

### Blood clotting disorders

Certain individuals have an increased risk of clot formation (thrombosis) and this may result in the blockage of forming placental blood vessels. These women are also at a higher risk of venous thrombosis of other blood vessels. The most common of these is deep venous thrombosis, or DVT.

WHAT DO WE DO FOR THIS? SPECIFIC DRUGS ETC?

### Other medical conditions

Endocrine (hormonal) diseases such as thyroid disorders and uncontrolled Diabetes Mellitus have been associated with increased occurrence of miscarriages. Obviously many other severe medical conditions can interfere with the wellbeing of the early pregnancy.

WHAT DO WE DO FOR THIS?

## Hormone imbalances

Hormone imbalances in the early phase after conception remain a controversial cause of pregnancy loss and infertility. The link between the polycystic ovarian syndrome and miscarriage is widely reported but still not conclusively proven.

WHAT DO WE DO FOR THIS? MAYBE ADVICE ON REDUCING WEIGHT ETC?

Women can start by taking a few small changes to their lifestyle to reduce their risk of having a miscarriage. Things like high caffeine or alcohol and smoking, which have been linked to miscarriage, should be minimised or cut out altogether.

Obesity is also a factor and a 5 per cent reduction in Body Mass Index significantly benefits a woman's fertility.

These lifestyle factors combined with the growing number of available therapies for miscarriage, the outlook for women with recurrent miscarriage is encouraging.

Dr Sacks is a fertility specialist at IVFAustralia.

He also heads the Miscarriage Care program at IVFAustralia.