APPENDIX 1. Types of Miscarriage

Type	Characteristics
Threatened miscarriage	• Intrauterine pregnancy of < 20 weeks gestation • Associated with uterine bleeding and possible pain/cramping • Closed internal os • ~ 50% risk of progression to complete miscarriage (if foetal cardiac motion detected on ultrasound, < 5% proceed to miscarriage)
Inevitable miscarriage	• Rupture of gestational sac before 20 weeks gestation • Internal os is open but conception products not yet expelled • Menstrual-like cramping common and usually preceded by uterine bleeding • All patients will spontaneously miscarry
Incomplete miscarriage	• Products of conception not yet expelled completely, residual gestational sac detected on ultrasound • Patient describes passage of some tissue but symptoms (vaginal bleeding, pelvic pain) often persist
Complete miscarriage	• Products of conception expelled completely • Significant cramping and bleeding have resolved and cervical os is closed on examination • Can be difficult to confirm clinically • On ultrasound: no gestational sac is detected; endometrial thickness < 15 mm
Delayed miscarriage Also known as missed abortion, early foetal demise or blighted ovum	• A non-viable pregnancy: Gestational sac diameter ≥ 20 mm with no foetal pole or yolk sac (or < 20 mm with no change seven days apart) or Foetal pole > 6 mm with no foetal heart activity (or < 6 mm with no change seven days apart) • Usually no uterine bleeding – conception products are retained up to four weeks • Loss of pregnancy symptoms

Sources:

1) Godfrey EM, Leeman L, Lossy P. Early pregnancy loss needn't require a trip to the hospital. J Fam Pract 2009; 58(11):585-590.

2) Hinshaw K, Fayyad A, Munjuluri P. The management of early pregnancy loss. Green top guideline 25. 2006. Royal College of Obstetricians and Gynaecologists (RCOG). Guidelines and Audit Committee of the RCOG.

3) Jauniaux E, Johns J, Burton GJ. The role of ultrasound imaging in diagnosing and investigating early pregnancy failure. Ultrasound Obstet Gynecol 2005; 25(6):613-624.

APPENDIX 2. Managing Early Pregnancy Loss with Misoprostol

Candidates	Women with a confirmed diagnosis of a nonviable pregnancy (via TVUS) whose uterine size is < 12 weeks gestation.
Pain management	Make sure she has analgesia, ideally NSAIDs (e.g., ibuprofen) and an opiate analgesic (e.g., Co-codamol). Instruct the patient to take one ibuprofen every six hours as needed. If pain is severe, 1–2 tablets of Co-codamol can be taken every 3–4 hours as needed.
Patient instructions	Typically, women will have vaginal bleeding that is heavier than a menses for 3–4 days and then lightens to spotting. If heavy bleeding occurs (soaking two pads an hour for more than two hours), instruct the patient to phone the hospital. Other side effects (which only occur in a minority of women) include nausea, vomiting, fever and chills. Diarrhoea is more common with sublingual misoprostol.
Follow-up	Advise women to take a urine pregnancy test 3 weeks after medical management unless they experience worsening symptoms, in which case advise them to return to the hospital. Women with a positive pregnancy test should be followed up in hospital to ensure that there is no molar or ectopic pregnancy. [44]

Note: Misoprostol is not suitable for the management of ectopic pregnancy which must be excluded before treatment is initiated.

Sources:

1) Blum J, Winikoff B, Gemzell-Danielsson K, Ho PC, Schiavon R, Weeks A. Treatment of incomplete abortion and miscarriage with misoprostol. Int J Gynaecol Obstet 2007; 99 Suppl 2:S186-S189.

2) Hinshaw K, Fayyad A, Munjuluri P. The management of early pregnancy loss. Green top guideline 25. 2006. Royal College of Obstetricians and Gynaecologists (RCOG). Guidelines and Audit Committee of the RCOG.

3) Johnson N, Priestnall M, Marsay T, Ballard P, Watters J. A randomised trial evaluating pain and bleeding after a first trimester miscarriage treated surgically or medically. Eur J Obstet Gynecol Reprod Biol 1997; 72(2):213-215.

4) Godfrey EM, Leeman L, Lossy P. Early pregnancy loss needn't require a trip to the hospital. J Fam Pract 2009; 58(11):585-590.

5) ACOG Committee Opinion No. 427: Misoprostol for postabortion care. Obstet Gynecol 2009; 113(2 Pt 1):465-468.

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Miscarriage

About 1 in 7 recognised pregnancies end in miscarriage. Most are caused by a one-off fault in the genes. Always tell your doctor if you have vaginal bleeding when you are pregnant. Call an ambulance if the bleeding is very heavy, or if you have severe abdominal pain. Losing a pregnancy can be hard for both partners. Most women who miscarry go on to have a successful pregnancy next time.

What is a miscarriage?

Miscarriage is the loss of a pregnancy at any time up to the 24th week. A loss after this time is called a stillbirth. 7 or 8 miscarriages out of 10 occur before 13 weeks of pregnancy.

Note: sometimes medical information may refer to a miscarriage as a spontaneous abortion. This may be upsetting as in usual language the word abortion is used to mean a procedure to end a pregnancy.

How common is miscarriage?

About 1 in 7 **recognised** pregnancies end in miscarriage. Far more pregnancies than this do not make it - as many as half. This is because in many cases a very early pregnancy ends before you miss a period, and before you are aware that you are pregnant.

The vast majority of women who miscarry go on to have a successful pregnancy next time. Recurrent miscarriages (three or more miscarriages in a row), occur in about 1 in 100 women.

What causes miscarriage?

It is thought that most early miscarriages are caused by a one-off chromosomal fault. This is usually an isolated genetic mistake, and rarely occurs again. Such genetic mistakes become more common when the mother is older - that is, over 35 years old. This means women having children when they are over 35 years old are more likely to have a miscarriage.

There are other less common causes of miscarriage. These include: hormonal imbalance, abnormalities of the womb, weakness of the cervix and certain infections like listeria and rubella (German measles). Alcohol abuse, cigarette smoking, illicit drug use and obesity may also increase the risk of miscarriage. If you are overweight, you may be able to reduce your chances of having a miscarriage if you lose weight before you try to get pregnant.

Investigations into the cause of a miscarriage are not usually carried out unless you have three or more miscarriages in a row. This is because most women who miscarry will not miscarry again. Even two miscarriages are more likely to be due to chance than to some underlying cause.

Some myths about the cause of miscarriage

After a miscarriage it is common to feel guilty and to blame the miscarriage on something you have done, or failed to do. This is almost always not the case. In particular, miscarriage is not caused by lifting, straining, working, constipation, straining at the toilet, stress, worry, sex, eating spicy foods, or normal exercise.

There is also no proof that waiting for a certain length of time after a miscarriage improves your chances of having a healthy pregnancy next time.

What is a threatened miscarriage?

It is common to have some light vaginal bleeding sometime in the first 12 weeks of pregnancy. This does not always mean that you are going to miscarry. Often the bleeding settles and the growing baby is healthy. This is called a threatened miscarriage. You do not usually have pain with a threatened miscarriage. If the pregnancy continues, there is no harm done to the baby.

In some cases, a threatened miscarriage progresses to a miscarriage.

What are the symptoms of miscarriage?

The usual symptoms of miscarriage are vaginal bleeding and lower abdominal cramps. You may then pass some tissue from the vagina, which often looks like a blood clot. In many cases, the bleeding then gradually settles. The time it takes for the bleeding to settle varies. It is usually a few days, but can last two weeks or more. For most women, the bleeding is heavy with clots, but not severe - it is more like a heavy period. However, the bleeding can be severe in some cases.

In some cases of miscarriage, there are no symptoms. The fetal heart stops beating, but the fetus remains in the womb. You may have no pain or bleeding. This type of miscarriage may not be found until you have a routine ultrasound scan. This may be referred to by doctors as a missed miscarriage.

The typical pain with a miscarriage is crampy lower abdominal pain. If you have severe, sharp, or one-sided abdominal pain, this may suggest ectopic pregnancy. This is a pregnancy that develops outside the womb. There may be very little blood lost, or the blood may look almost black. A ruptured ectopic pregnancy is a potentially life-threatening situation that needs emergency surgery. You should call an ambulance or go to your nearest Accident and Emergency department if you are worried that you may have an ectopic pregnancy.

Do I need to go to hospital?

You should always report any bleeding in pregnancy to your doctor. It is important to get the correct diagnosis, as miscarriage is not the only cause of vaginal bleeding. If you bleed heavily or have severe abdominal pain when you are pregnant, call an ambulance immediately.

Most women with bleeding in early pregnancy are seen by a doctor who specialises in pregnancy - an obstetrician. This is often in an Early Pregnancy Assessment Unit at your local hospital. It is usual to have an ultrasound scan. This helps to determine whether the bleeding is due to:

- A threatened miscarriage (a heartbeat will be seen inside the womb).
- A miscarriage (no heartbeat is seen).
- Some other cause of bleeding (such as an ectopic pregnancy - no pregnancy inside the womb).

Do I need any treatment?

Once the cause of bleeding is known, your doctor will advise on your treatment options.

For many years it was common to do a small operation to clear the womb following a miscarriage or partial (incomplete) miscarriage. This was often called a D&C. The logic was that this would make sure all pregnancy tissue was gone and prevent infection or prolonged bleeding. However, recent evidence shows that an operation is not needed in most cases.

Many women now opt to "let nature take its course". In most cases the pregnancy tissue is passed out naturally and the bleeding will stop within a few days. An operation can still be an option if the bleeding does not stop within a few days, or if bleeding is severe.

In some cases you may be offered what doctors call medical treatment for your miscarriage. That is, you may be offered medication to take either by mouth or to insert into the vagina. The medication helps to clear the womb and can have the same effect as an operation. You do not usually need to be admitted to hospital for this. You may continue to bleed for up to three weeks when medical treatment is used. However, the bleeding should not be too heavy. Many women prefer this treatment because it usually means that they do not need to be admitted to hospital and do not need an operation.

Feelings

Many women and their partners find that miscarriage is distressing. Feelings of shock, grief, depression, guilt, loss and anger are common.

It is best not to bottle up feelings but to discuss them as fully as possible with husbands or partners, friends, with a doctor or midwife, or with someone who can listen and understand. As time goes on, the sense of loss usually becomes less. However, the time this takes varies greatly. Pangs of grief sometimes recur out of the blue. The time when the baby was due to be born may be particularly sad.

Further help

The Miscarriage Association

c/o Clayton Hospital, Northgate, Wakefield, West Yorkshire, WF1 3JS
Tel: (Contact) 01924 200795 Helpline: 01924 200799 Web: www.miscarriageassociation.org.uk
A national charity which supplies support and information on pregnancy loss. It co-ordinates a network of volunteer telephone contacts and support groups.

Scottish Care and Information on Miscarriage (SCIM)

285 High Street, Glasgow, G4 0QS
Tel: 0141 552 5070 Web: www.miscarriagesupport.org.uk
A charity managed by people in Scotland who have themselves had a miscarriage.

Further reading & references

- The management of early pregnancy loss, Royal College of Obstretricians and Gynaecologists (2006)
- Miscarriage, Prodigy (February 2010)
- Rai R, Regan L; Recurrent miscarriage. Lancet. 2006 Aug 12;368(9535):601-11.
- Satpathy HK, Fleming A, Frey D, et al; Maternal obesity and pregnancy. Postgrad Med. 2008 Sep 15;120(3):E01-9.

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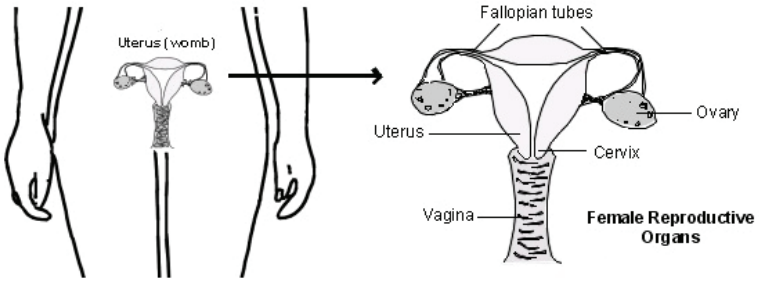
Ectopic Pregnancy

An ectopic pregnancy occurs in about 1 in 100 pregnancies. Although many ectopic pregnancies are now treated without the need for an operation, you should always see a doctor urgently if you think you have an ectopic pregnancy. Symptoms are listed below but include lower abdominal pain which can become severe. A ruptured ectopic pregnancy is life-threatening, needing emergency surgery. A pregnancy is ectopic when a it occurs outside the uterus (womb). Ectopic means 'misplaced'.

Understanding normal early pregnancy

An ovum (egg) is released from an ovary into a Fallopian tube. This is called ovulation and usually occurs once a month about halfway between periods. Sperm can survive in the Fallopian tubes for up to five days after having sex. A sperm may then combine with the ovum (fertilisation) to make an embryo. The tiny embryo is swept along a Fallopian tube to the uterus by tiny hairs (cilia). It normally attaches to the inside lining of the uterus and develops into a baby.



Where does an ectopic pregnancy develop?

Most ectopic pregnancies occur when a fertilised egg attaches to the inside lining of a Fallopian tube (a tubal ectopic). Rarely, an ectopic pregnancy occurs in other places such as in the ovary or inside the abdomen. The rest of this leaflet deals only with tubal ectopic pregnancy.

What are the problems with an ectopic pregnancy?

A tubal ectopic pregnancy never survives. Possible outcomes include the following:

- The pregnancy often dies after a few days. About half of ectopic pregnancies probably end like this. You may have no symptoms, and you may never have known that you were pregnant. Sometimes there is slight pain and some vaginal bleeding like a miscarriage. Nothing further needs to be done if this occurs.
- The pregnancy may grow for a while in the narrow Fallopian tube. This can stretch the tube and cause symptoms. This is when an ectopic pregnancy is commonly diagnosed.
- The narrow Fallopian tube can only stretch a little. If the pregnancy grows further it will normally rupture (split) the Fallopian tube. This can cause heavy internal bleeding and pain. This is a medical emergency.

What are the symptoms of an ectopic pregnancy?

PBLP PABP

Symptoms typically develop around the 6th week of pregnancy. This is about two weeks after a missed period if you have regular periods. However, symptoms may develop at any time between 4 and 10 weeks of pregnancy. You may not be aware that you are pregnant. For example, your periods may not be regular, or you may be using contraception and not realise it has failed. Symptoms can also start about the time a period is due. At first you may think the symptoms are just a late period.

Symptoms include one or more of the following.

- Pain on one side of the lower abdomen. It may develop sharply, or may slowly get worse over several days. It can become severe.
- Vaginal bleeding often occurs, but not always. It is often different to the bleeding of a period. For example, the bleeding may be heavier or lighter than a normal period. The blood may look darker. However, you may think the bleeding is a late period.
- Other symptoms may occur such as diarrhoea, feeling faint, or pain on passing faeces (stools).
- Shoulder-tip pain may develop. This is due to some blood leaking into the abdomen and irritating the diaphragm (the muscle used to breathe).
- If the Fallopian tube ruptures and causes internal bleeding, you may develop severe pain or 'collapse'. This is an emergency as the bleeding is heavy.
- Sometimes there are no warning symptoms (such as pain) before the tube ruptures. Therefore 'collapse' due to sudden heavy internal bleeding is sometimes the first sign of an ectopic pregnancy.

Who gets ectopic pregnancy?

Ectopic pregnancy can occur in any sexually active woman. In the UK there are around 10,700 ectopic pregnancies each year.

The chance is higher than average in the following 'at-risk' groups:

- If you have already had an ectopic pregnancy you have a slightly higher chance that a future pregnancy will be ectopic. If you have had two or more ectopic pregnancies, then your chances of another ectopic pregnancy are even greater.
- If you have kinking, scarring, damage, or other abnormality of a Fallopian tube. This is because a fertilised egg may become stuck in the tube more easily. For example:
    - If you have had a previous infection of the uterus or Fallopian tube (pelvic inflammatory disease). This is most commonly due to either chlamydia or gonorrhoea. These infections can lead to some scarring of the Fallopian tubes. Chlamydia and gonorrhoea are common causes of pelvic infection.
    - Previous sterilisation operation. Although sterilisation is a very effective method of contraception, if a pregnancy does occur, about 1 in 20 are ectopic.
    - Any previous surgery to a Fallopian tube or nearby structures.
    - If you have endometriosis (a condition of the uterus and surrounding area).
- If you use an intrauterine contraceptive device (coil). Again, pregnancy is rare as this is an effective method of contraception.
- If you are using assisted conception (some types of infertility treatments).
- The risk of ectopic pregnancy increases in women over the age of 35 years and also in smokers.

If you are in any of the above groups, see a doctor as soon as you think you may be pregnant. Tests can detect pregnancy as early as 7-8 days after fertilisation, which can actually be before your period is even due.

How is ectopic pregnancy confirmed?

If you have symptoms that may indicate an ectopic pregnancy you will usually be seen in the hospital immediately.

- A urine test can confirm that you are pregnant.
- An ultrasound scan may confirm an ectopic pregnancy. This is usually a transvaginal (internal) scan which is not painful and shows good views of the Fallopian tubes. However, the scan may not be clear if the pregnancy is very early. If this is the case, then a repeat scan a few days later if often done.
- Blood tests that show changes in the pregnancy hormones - human chorionic gonadotropin (hCG) - are also usually done.

What are the treatment options for ectopic pregnancy?

Ruptured ectopic pregnancy

Emergency surgery is needed if a Fallopian tube ruptures with heavy bleeding. The main aim is to stop the bleeding. The ruptured Fallopian tube and remnant of the early pregnancy are then removed. The operation is often life-saving.

Early ectopic pregnancy - before rupture

Ectopic pregnancy is most often diagnosed before rupture. Your doctor will discuss the treatment options with you and, in many cases, you are able to decide which treatment is best for you. These may include the following:

- *Surgery* Removal of the tube (either the whole tube or part of it) and the ectopic pregnancy is most commonly performed by a laparoscopic operation (keyhole surgery). Salpingectomy (removal of the Fallopian tube containing the ectopic pregnancy) is performed if the other tube is healthy. Salpingotomy (removal of only a section of the tube with the ectopic pregnancy in) is performed if the other tube is unhealthy. For example, scarred from a previous infection. However, many women with an ectopic pregnancy do not need to have an operation.

- *Medical treatment* Medical treatment of ectopic pregnancies is now more common and avoids the need for surgery. A medicine called methotrexate is often given, usually as an injection. It works by killing the cells of the pregnancy growing in the Fallopian tube. It is normally only advised if the pregnancy is very early. The advantage is that you do not need an operation. The disadvantage is that you will need close observation for several weeks with repeated blood tests and scans to check it has worked. Women usually have a blood test for hCG (human chorionic gonadotropin) every 2-3 days until the levels are low. Scans are usually repeated weekly. Methotrexate can cause side-effects which include nausea and vomiting in some women. It is common for some abdominal pains to develop 3-7 days after having methotrexate.

- *Expectancy ('wait and see')* Not all ectopic pregnancies are life threatening or lead to a risk to the mother. In many cases the ectopic pregnancy resolves by itself with no future problems. The pregnancy often dies in a way similar to a miscarriage. A possible option is to 'see how things go' if you have mild or no symptoms. You would need to have treatment if symptoms become worse. Also, you will need close observation and repeated scans and blood tests to check on how things are developing.

If your blood group is rhesus negative, then you will need an injection of anti-D immunoglobulin. You are rhesus positive if you have the rhesus factor (which is a protein on the surface of your red blood cells). If the protein is not present, you are rhesus negative. All pregnant women have a blood test to determine whether they are rhesus positive or negative. The injection of anti-D immunoglobulin simply prevents you from producing antibodies, which can be harmful in future pregnancies, if you are rhesus negative.

The above is a brief description of treatment options. A gynaecologist will advise on the pros and cons of each treatment with you. One common question is - 'What is the chance of having a future normal pregnancy after an ectopic pregnancy?' Even if one Fallopian tube is removed, you have about a 7 in 10 chance of having a future normal pregnancy. (The other Fallopian tube will still usually work.) However, 1 in 10 future pregnancies may lead to another ectopic pregnancy. It is therefore important that if you have had an ectopic pregnancy in the past you should go to see your doctor early in future pregnancies.

It is common to feel anxious or depressed for a while after treatment. Worries about possible future ectopic pregnancy, the affect on fertility, and sadness over the loss of the pregnancy are normal. Do talk with a doctor about these and any other concerns following treatment.

In summary

- Ectopic pregnancy is common. The pregnancy never survives.
- The typical first symptom is pain in the lower abdomen after a recent missed period.
- As the pregnancy grows it may rupture the Fallopian tube, requiring emergency surgery.
- Planned treatment before rupture occurs is best.
- Most women with ectopic pregnancies do not need surgery
- Tell a doctor as soon as you think you are pregnant if you are in a risk group listed above.

Further help and advice

The Ectopic Pregnancy Trust
c/o 2nd Floor, Golden Jubilee Wing, King's College Hospital, Denmark Hill, London, SE5 9RS
Helpline: 020 7733 2653 Web: www.ectopic.org.uk

Further reading & references

- Management of Tubal Pregnancy, Royal College of Obstretricians and Gynaecologists (2004)
- Ectopic pregnancy, Clinical Knowledge Summaries (February 2010)
- Nama V, Manyonda I; Tubal ectopic pregnancy: diagnosis and management. Arch Gynecol Obstet. 2008 Jul 30.
- Murray H, Baakdah H, Bardell T, et al; Diagnosis and treatment of ectopic pregnancy. CMAJ. 2005 Oct 11;173(8):905-12.
- Barnhart KT; Clinical practice. Ectopic pregnancy. N Engl J Med. 2009 Jul 23;361(4):379-87.

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