Ectopic Pregnancy

An ectopic pregnancy is a pregnancy which is not in the normal place (the womb). Ectopic means 'misplaced'. It occurs in about 11 in 1,000 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 include lower tummy (abdominal) pain which can become severe. A ruptured ectopic pregnancy is life-threatening, needing emergency surgery.

Understanding normal early pregnancy

An egg (ovum) 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 you have had 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 womb (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 (ovum) attaches to the inside lining of a Fallopian tube (a tubal ectopic pregnancy). Rarely, an ectopic pregnancy occurs in other places such as in the ovary, the neck of the womb (cervix) or inside the tummy (abdomen). Also rarely, a pregnancy can develop in the womb at the same time as an ectopic pregnancy outside the womb (a heterotopic pregnancy). 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 similar to 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 split (rupture) the Fallopian tube. This can cause heavy internal bleeding and pain. This is a medical emergency.

Ectopic pregnancy symptoms

Symptoms typically develop around the sixth 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 tummy (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 poo (faeces).
Shoulder-tip pain may develop. This is due to some blood leaking into the abdomen and irritating the muscle used to breathe (the diaphragm).
You may feel dizzy or faint.
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 occasionally the first sign of an ectopic pregnancy.

Who develops an ectopic pregnancy?
Ectopic pregnancy can occur in any sexually active woman. In the UK there are nearly 12,000 women seen in hospitals with 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 damage or other abnormality of a Fallopian tube. This is because a fertilised egg (ovum) may become stuck in the tube more easily. For example:
  - If you have had a previous infection of the womb (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.
  - Previous sterilisation operation. Sterilisation is a very effective method of contraception. However, in the rare event that a pregnancy does occur, it has a higher risk of being ectopic.
  - Any previous surgery to a Fallopian tube or nearby structures.
  - If you have a condition causing inflammation of the uterus and surrounding area (endometriosis).
- If you use an intrauterine contraceptive device (IUCD). Pregnancy is rare as this is a very effective method of contraception. However, if you become pregnant while using an IUCD, it has a higher chance of being ectopic than if you did not have the IUCD.
- If you are using assisted conception (some types of infertility treatments).

However, around one third of women with an ectopic pregnancy do not have any of these risk factors.

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 an internal (transvaginal) 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 is often done.
- Blood tests that show changes in the level of a pregnancy hormone called human chorionic gonadotrophin (hCG) are also usually done. In a pregnancy which is developing, the hCG levels gradually go up.

What are the treatment options for ectopic pregnancy?

Ruptured ectopic pregnancy
Emergency surgery is needed if a Fallopian tube splits (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 keyhole surgery (a laparoscopic operation). Removal of the Fallopian tube containing the ectopic pregnancy (salpingectomy) is usually performed if the other tube is healthy. Removal of only a section of the tube with the ectopic pregnancy in it (salpingotomy) is usually performed if the other tube is already damaged.

- **Medical treatment.** Medical treatment of ectopic pregnancies is now an option in many cases 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. You will need to have a blood test for hCG every 2-3 days until your levels are low. Scans are usually repeated weekly. Methotrexate can cause side-effects which include feeling sick (nausea) and being sick (vomiting) in some women. It can be common for some tummy (abdominal) pains to develop 3-7 days after having methotrexate.
• **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. You will need close observation by your gynaecologist 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 if you have an operation for your ectopic pregnancy or if you have had a lot of bleeding. 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. You do not need this injection though if you receive medical treatment.

The above is a brief description of treatment options. A gynaecologist will advise on the pros and cons of each treatment with you. This will include any complications or side-effects which could occur with each option.

**What if I have a pregnancy in the womb at the same time as an ectopic pregnancy?**

This is called a heterotopic pregnancy and is unusual. It is more common if you have become pregnant with in vitro fertilisation (IVF) treatment. If the pregnancy in the womb is healthy and developing normally then it will not be possible to have methotrexate treatment. This is because it would damage the baby in the right place as well as the tissue growing in the wrong place. You may need an operation or injection to remove or destroy the pregnancy in the wrong place, so that the normal pregnancy can continue safely. In some cases no treatment is needed, and the pregnancy in the wrong place will resolve itself, leaving you only with the normal pregnancy. Again, your specialist will advise you.

**Are there any complications of ectopic pregnancy?**

In the now uncommon event of the ectopic pregnancy rupturing, there may be severe consequences. Heavy bleeding can cause serious medical problems and, occasionally, even death. However, most women nowadays are diagnosed in the early stages, before this happens. In this scenario, most women recover very well. There are some rare complications after surgery, which your gynaecologist would discuss with you before the operation. As discussed, there are often some side-effects from taking the medical treatment option.

Women often want to know if they will be able to have a normal pregnancy in the future after an ectopic pregnancy. If you had no past history of problems conceiving or diseases involving your Fallopian tubes before your ectopic pregnancy, your fertility will not be affected and you should have no more chance of having an ectopic pregnancy than a woman who has not had an ectopic pregnancy. If you had one of the risk factors above, however, you may be more at risk of problems in the future. If you had to have an operation, you are more likely to have fertility problems and problems with future ectopic pregnancies than if you had medical treatment or no treatment was needed. Even if one Fallopian tube is completely removed, you have about a 6 in 10 chance of having a future normal pregnancy. (The other Fallopian tube will still usually work.) However, 1-2 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 effect 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 tummy (abdomen) after a recent missed period.
- As the pregnancy grows it may tear (rupture) the Fallopian tube, requiring emergency surgery.
- Planned treatment before rupture occurs is best.
- Many women with ectopic pregnancies do not need surgery

**Further reading & references**

- Ectopic pregnancy and miscarriage: diagnosis and initial management; NICE Clinical Guideline (December 2012)
- Diagnosis and management of ectopic pregnancy; Royal College of Obstetricians and Gynaecologists. Green Top Guideline No 21. November 2016
- Ectopic pregnancy; NICE CKS, July 2013 (UK access only)

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