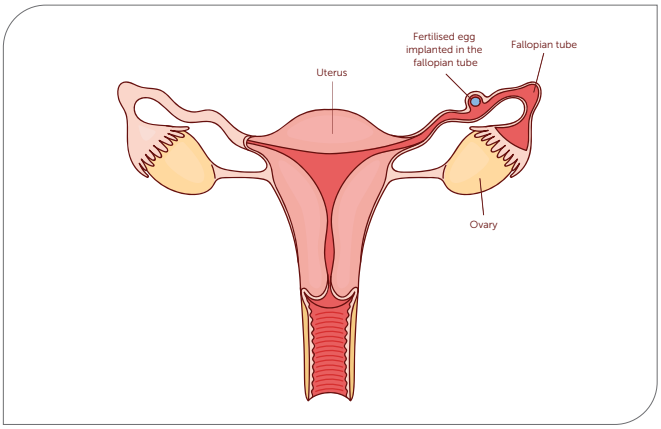
Ectopic Pregnancy

What is an ectopic pregnancy? An ectopic pregnancy happens when an egg is fertilised (known as an embryo) and instead of travelling along the uterine (fallopian) tube for implantation in the uterus to begin growing into a pregnancy, the embryo implants somewhere outside the uterus (womb).

When the fertilised egg implants (starts developing) in a place other than the uterus, it can cause significant pain and, if not treated quickly, may lead to internal bleeding that can sometimes be life-threatening for the woman.



Symptoms of an ectopic pregnancy

Ectopic pregnancy symptoms can be mild at first, so it's important not to ignore them. Possible signs include:

- Irregular vaginal bleeding or spotting.
- Pain in the lower abdomen or pelvis, particularly if it is on one side or worse with moving around.
- Pain at the tip of the shoulder (sometimes called referred pain because of internal bleeding irritating the diaphragm).
- Feeling unwell with dizziness, light-headedness or feeling a racing heartbeat.

Why do some women get ectopic pregnancies?

The underlying reason for the ectopic is not always known. Adhesions or blockages from infection or surgery around the fallopian tube may increase the chances of an ectopic pregnancy. Ectopic pregnancy is also more common if you have endometriosis or have had fertility treatment to conceive or if you have had an ectopic pregnancy before and if you still have at least one fallopian tube. It is important for you to know that nothing you did or did not do causes an ectopic pregnancy. There is nothing that you can do to prevent an ectopic pregnancy.

What should I do if I think I might have an ectopic pregnancy?

If you have a positive pregnancy test or a suspicion that you might be pregnant and have any of the above symptoms go to an emergency department as soon as possible. If an ectopic pregnancy is confirmed, your health care team will explain the diagnosis and results of any tests and explain the treatment choices and talk with you about what is best for your situation.

How is an ectopic pregnancy diagnosed?

Your health care team will ask whether you are (or could be) pregnant, about your symptoms and recommend examinations or tests that will help them to make the diagnosis. These tests and examinations may include:

- **Blood tests:** to measure the pregnancy hormone (hCG) levels in your blood, as well as bloods tests for anaemia (low blood count) and blood group.
- **Abdominal or pelvic examination:** this may include a speculum examination.
- **Pelvic ultrasound:** this usually includes transvaginal ultrasound which requires the insertion of a slim probe into the vagina to look for signs of a pregnancy outside your uterus. This gives the clearest pictures of the uterus, uterine tubes, ovaries and spaces around them, by compared to doing an ultrasound looking through your abdomen. There are features about the size and position of the pregnancy tissue that indicate if you have an ectopic pregnancy and will provide information about the best type of management.

The best way to diagnose an ectopic pregnancy is with a positive pregnancy test (with a urine or blood test) but without the usual increase in the pregnancy hormone level or the usual signs of a pregnancy on an ultrasound scan.

Neither hCG tests nor ultrasound scans on their own can always give a definite answer. Used together, they provide the clearest picture. Sometimes repeat blood tests and a second ultrasound are needed after a few days, especially if the first results are unclear or your symptoms continue. If your symptoms get worse while you are waiting for repeat tests, you should seek medical care straight away.

Types of ectopic pregnancy

Tubal ectopic pregnancy (see image)

Most ectopic pregnancies (97%) happen when the fertilised egg implants in the uterine tubes. This is called a tubal ectopic pregnancy.

Non-tubal ectopic pregnancy

A non-tubal ectopic pregnancy happens if the fertilised egg implants outside of the uterus or uterine tubes. These types of ectopic pregnancies are rare and include:

- **Interstitial ectopic pregnancy:** the implantation happens where the uterine tube connects to the uterus.
- **Cervical ectopic pregnancy:** the implantation happens in the cervix.
- **Caesarean scar pregnancy (CSP):** happens if the implantation is in a section of scar tissue from a previous caesarean birth.

Ruptured ectopic pregnancy

Sometimes an ectopic pregnancy will tear the tissue where it has implanted (e.g. in the uterine tube causing it to burst) which results in internal bleeding. This can be life-threatening if not treated immediately and cannot be managed with expectant management (see information below).

How is an ectopic pregnancy managed?

It is not safe to allow an ectopic pregnancy to continue to develop and once recognised, a plan needs to be made by your health care team about the safest options for watching or treating it. Your health care team will talk to you about the treatment options and explain the benefits and risks depending on the type of ectopic pregnancy and your symptoms or how unwell you are. You will be given advice about any testing needed afterwards to ensure that the pregnancy ends completely (if you have surgical management, you don't normally need any further tests, but with expectant or medical management you will).

Expectant Management

In some cases, the ectopic pregnancy ends on its own which means that the pregnancy will not continue. In these cases, the pregnancy tissue will resolve without any medical treatment -this is called expectant management. If you are otherwise well, meet certain pregnancy hormone level and ultrasound criteria, and would like to wait, then your healthcare team might suggest this approach.

If you become unwell whilst having expectant management, you will need to go to an emergency department. If the pregnancy hormone level is not decreasing appropriately, medical or surgical management of the ectopic pregnancy may be recommended. Emergency surgical management for ectopic pregnancy may be required if you become unwell and there are signs of a ruptured ectopic pregnancy.

Medical Management

Medical management may be recommended if the ectopic pregnancy is unlikely to resolve on its own, but surgery is not immediately required. It involves using medication (methotrexate) to stop the pregnancy tissue from growing. The medication is usually given as an injection. Methotrexate does not work instantly and may also not be successful with one dose - some women need a second dose 4-7 days after the first dose if the first dose is not fully effective. You will need regular blood tests over the following days and weeks to check that your pregnancy hormone levels (hCG) are going down as expected. Side effects of the medication, which are more common after two doses, can include nausea, diarrhoea, gastrointestinal symptoms, or abdominal pain.

Surgical Management

Surgery may be recommended if you are unwell, if there are signs of bleeding or rupture, if the ectopic pregnancy is large or in a position where surgery is the safest option, or if medical or expectant management are not suitable for you for other reasons. Some women may choose to have surgery because it is the and most definite way of treating an ectopic pregnancy.

Surgery is most often done by laparoscopy (keyhole surgery). This is an operation in which a surgeon makes a few small cuts to your abdomen and passes a thin surgical telescope with a camera (laparoscope) and small instruments through the cuts. This allows them to see inside and remove the ectopic pregnancy. Most women will be able to go home the same day.

The type of surgery recommended will depend on where the ectopic pregnancy is. If the ectopic pregnancy is in your uterine tube you may need to have the uterine tube removed (salping*ectomy*) or have the pregnancy tissue is removed from the uterine tube which is left in place (salping*otomy*).

You may ask your health care team if there are other options for surgical treatment available in your setting and why they are recommending one option over another.

Follow up tests

With expectant or medical management, you may have to have one or more blood tests to confirm that your pregnancy hormone levels are falling and that you are no longer pregnant. This sort of follow up is not usually required after surgical management, but your health care team may want to see you for a post-operative check.

Future pregnancy

If you have had an ectopic pregnancy, you are at higher risk of having another ectopic in a future pregnancy. It is important to speak to your health care team about risk factors for ectopic pregnancy (e.g. STIs, smoking) and whether there is anything that you can change. Your health care team will also give you advice about having tests for pregnancy hormone levels (which may need to be repeated) and an ultrasound scan early in any future pregnancy to check that the pregnancy is developing in the right place (inside the uterus).

It is uncertain if any method of treatment will increase or decrease the chance of you having an ectopic pregnancy again.

Medical management may increase the likelihood of having a pregnancy inside the uterus. However, salpingectomy is associated with higher likelihood of resolution of the ectopic pregnancy compared to medical management.

If you have had medical (methotrexate) treatment, you should be advised to wait three months before getting pregnant again and contraception should be discussed.

Table 1: summary of management options for ectopic pregnancy

Factors	Treatment options		
	Expectant management	Medical Management	Surgical management
What it involves	Closely monitoring the ectopic pregnancy to see if it ends on its own without treatment	An injection of methotrexate (a medication that stops the pregnancy tissue from growing) into a large muscle (usually your buttock or arm)	Surgery to remove the ectopic pregnancy usually done by laparoscopy (in emergencies, a larger cut (laparotomy) may be needed)
Success	Success rates* estimated to be between 84% and 87%	Success rates* estimated to be between 80% to 90%	Best chance of success
Treatment criteria	Strict criteria required to be suitable	Strict criteria required to be suitable	Suitable for all cases
Treatment	No medical intervention required	May not require surgery	Most definite treatment — less likely to need further intervention Quick resolution compared to waiting or medication
		May be unsuccessful and require a second dose	
	May require emergency surgery	Second dose is often successful	
		May not work, and surgery may still be required	
Side-effect profile	No side effects	Risk of short-term side effects such as nausea, diarrhoea, or abdominal pain	Involves an operation under anaesthetic, with risks such as bleeding, infection, or damage to nearby organs and possible increased need for pain medication May result in loss of a uterine tube, which can affect future fertility
Manage risk (of rupture)	You should be no more than 2 hours' drive to get to a specialist surgical facility or an emergency department with doctors who are experienced in emergency management	May need specialist surgical facilities	Requires specialist surgical facilities

Legend: Benefit Limitation

Factors	Treatment options (continued)		
	Expectant management	Medical Management	Surgical management
Place of care	Home**	Home**	Hospital admission
Monitoring	Requires close monitoring if you become unwell and need to present to an emergency department	Requires close monitoring if you become unwell and need to present to an emergency department	May not live in an area with convenient access to a hospital that can provide the required surgery May plan to remove the ectopic pregnancy and may escalate to need to remove the whole uterine tube Requires a hospital with appropriate surgical expertise
Follow up after treatment	Regular blood tests and follow-up appointments to check your hormone levels	Requires regular blood tests and follow-up appointments until hormone levels return to normal	Reduced need for follow up
Future Pregnancy	Future fertility is usually preserved, and many women go on to have a healthy pregnancy afterwards	Need to delay conceiving again (and may need to use contraception to prevent pregnancy for 3 months)	With one healthy uterine tube, many women are still able to conceive naturally
		Future fertility is usually preserved, and many women go on to have a healthy pregnancy afterwards	Some women may consider assisted reproductive treatment (ART), such as IVF, if both tubes are affected or if they wish to avoid further risk
Risk in future pregnancy	Lower risk for next pregnancy	Lower risk for next pregnancy	Higher risk in next pregnancy

Legend: Benefit Limitation

* Success rates for women meeting the criteria.

** There may be geographical challenges to accessing medical or expectant management for women living in rural and remote regions, as they require regular monitoring and blood tests. Quick access to emergency care may be necessary if your condition changes. For women living in rural or remote areas, this may not always be possible, and surgery may be the safer option. Your doctor will talk with you about what is available and safe where you live.

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