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# Pelvic inflammatory disease

Pelvic inflammatory disease (PID) is an internal infection which has usually passed into the womb (uterus) and its surrounding organs from the vagina or neck of the womb (cervix). It may also affect the lower abdominal area (pelvis) around these organs. It is important to treat it with antibiotics to prevent complications. In most cases the infection is passed on through sex (a sexually transmitted infection – STI).

# Pelvic inflammatory disease symptoms

Symptoms of PID include:

- **Pain** in the lower tummy (abdomen), called the pelvic area. This is the most common symptom of PID and can range from mild to severe.
- Abnormal vaginal bleeding which occurs in about 1 in 4 cases. This may be periods that are heavier than usual, or bleeding between periods, or bleeding after having sex.
- Pain during sex.
- Abnormal vaginal discharge.
- High temperature (fever).
- Lower back pain associated with some of the above symptoms.

Symptoms may develop quickly over just a few days. Sometimes symptoms are mild and develop slowly for example, a relatively mild abdominal pain that may 'grumble on' for weeks. In some cases no symptoms develop at all . However, there is still a risk of complications even if there are no symptoms at first.

# How common is pelvic inflammatory disease?

It is thought that approximately 220,000 women develop PID each year in the UK. It is most common in women aged between 15 and 24 years and is thought to affect between 4% and 12% of women in this age group at some time. The risk of developing PID is higher when there has been:

- A recent change of sexual partner. The risk goes up with the number of partners.
- A previous episode of PID or sexually transmitted infection.
- A recent abortion (termination of pregnancy).
- A recent operation or procedure on the womb (uterus).
- An intrauterine contraceptive device (coil) or intrauterine system inserted in the last 3 weeks.
- Unprotected sex.
- Douching (washing out the vagina with a shower or similar device).

### Pelvic inflammatory disease causes

#### Sexually transmitted infections

The commonest cause of PID is a sexually transmitted infection (STI). Chlamydia and gonorrhoea are the most common STIs causing PID; these are bacterial infections where the germs (bacteria) are passed on during sexual activity.

Another common cause is another type of bacterium called *Mycoplasma* genitalium.

It is possible for these bacteria to stay in the vagina or cervix (the neck of the womb) for some time without causing symptoms. The bacteria then travel into the womb and cause PID. It is therefore possible to develop PID weeks or months after having sex with an infected person.

#### Other causes

A few cases of PID are not due to an STI. The vagina normally contains many different types of bacteria which are usually harmless and are not passed on by sexual contact. However, these bacteria sometimes cause PID, particularly after having a baby or very soon after a procedure such as inserting an intrauterine contraceptive device (coil).

""The level of pain would just get worse to the point where it crippled me and I would spend days in bed. These symptoms were also accompanied by very painful heavy irregular periods, as well as spotting.""

Source: Laura, 30, from London

### Diagnosing pelvic inflammatory disease

#### What tests may be done?

If PID is suspected, a small sample (swab) of discharge is usually taken from the neck of your womb (cervix) or from the vagina. This is to test for any germs (bacteria). Urine tests can sometimes be used instead. A swab from the urethra (where you pass urine from) and blood tests may also be taken. These are to look for infecting bacteria or the effects of infection.

Sometimes the swabs and tests may not show any bacteria and other tests might be needed. For example, a blood test may show up some inflammation/infection, or an ultrasound scan may be able to show inflamed Fallopian tubes. Other scans are sometimes done.

Very occasionally a laparoscopy might be needed which is where a gynaecologist looks into the abdomen to see the womb (uterus) and tubes. Under a general anaesthetic a thin telescope (laparoscope) is pushed through the abdominal wall. This is called a laparoscopy but it is not routinely needed to diagnose PID and would only rarely be used for this.

PID may not be diagnosed for some time if symptoms are mild, or do not occur at first.

A pregnancy test is also usually done in women suspected of having PID. This is because an ectopic pregnancy can sometimes be confused with PID, as some of the symptoms are similar. An ectopic pregnancy is a pregnancy that develops in a Fallopian tube and can cause serious problems.

# Pelvic inflammatory disease treatment

The usual treatment for pelvic inflammatory disease is a course of antibiotics by mouth for at least two weeks. Sometimes the antibiotics need to be given via a vein in hospital which might be advised if there is evidence of severe infection (sepsis) or there are signs of a collection of pus (an abscess).

Two different antibiotics are often prescribed. This is to cover the range of possible germs (bacteria) that can cause PID. There are a number of different regimes to treat PID. It is very important to take the full course of treatment.

#### How soon does treatment start?

Treatment will usually be started as soon as possible if PID is suspected. This might sometimes be even before the results of samples (swabs) or other tests are available. This is because the earlier the treatment, the better the outlook, and the lower the risk of future fertility problems.

Occasionally, an operation is needed, for example, to drain an abscess if one develops (which is very uncommon).

Sex should be avoided until the affected person and their sexual partner have finished treatment.

### Does my partner need to be treated?

Yes. Any sexual partner within the previous six months should be tested for infection. If there has not been a sexual partner within the previous six months then the latest sexual partner (however long ago the relationship was) should be tested and treated. A course of antibiotics is usually advised whether or not infection is found on testing the partner. This is because:

- Many cases of PID are caused by chlamydia which is often passed on during sex.
- Men often have no symptoms with chlamydia but can still pass on the infection.

- The test for chlamydia is not 100% reliable. Treatment makes sure that any possible infection which may have been missed by the tests is cleared.
- If a sexual partner is infected and not treated, chlamydia may be passed back to the woman again after her treatment.

# Complications of pelvic inflammatory disease

Usually, complications do not develop if PID is diagnosed and treated early. Possible complications include one or more of the following:

- Difficulty becoming pregnant (infertility). PID can cause scarring or damage to the Fallopian tubes. This can occur whether or not the PID caused symptoms.
- An increased risk of a future pregnancy developing in a Fallopian tube (an ectopic pregnancy). This is due to damage to the Fallopian tube by the infection. There is a 1 in 10 risk of an ectopic pregnancy in a pregnancy after an episode of PID.
- Persistent pain may develop which can include pain during sex.
- The risks of developing some complications of pregnancy (such as miscarriage, premature birth and stillbirth) are increased in pregnant women with untreated active PID.
- Reactive arthritis. This is an uncommon complication of PID and is thought to be due to the immune system 'over-reacting' to pelvic infection in some cases.
- A collection of pus (an abscess) sometimes develops next to the womb (uterus) if the infection is severe.

Long-term complications are less likely to develop if treatment is started within 2-3 days of symptoms starting. This may be possible if symptoms develop quickly. However, some women with PID have mild symptoms, or no symptoms at all and therefore the infection may progress for quite some time before it is diagnosed or treated.

About 1 in 5 women who have PID have a further episode. This is often within two years. Reasons why this may occur include:

- If the ongoing sexual partner was not treated, following which the infection is likely to be passed back again.
- If the antibiotics were not taken properly or for long enough. The infection may then not clear completely, and may flare up again later.
- If there is a new sexual partner, not having 'safer sex' by using condoms.
- Some women are more prone to infection once their womb (uterus) or tubes have been damaged by a previous episode of PID.

The risk of developing complications such as infertility or chronic pelvic pain is greatly increased with repeated episodes of PID.

## Preventing pelvic inflammatory disease

Wearing a condom during sex helps to protect from STIs. The risk of infection increases with the number of changes of sexual partner. See the separate leaflet called Safer Sex.

People who are sexually active should be tested for chlamydia every year under the age of 25 or on changing a sexual partner. There are various local places where tests are provided free of charge - these are usually young people's clinics contraception/family planning clinics and sexual health (genitourinary) clinics and some pharmacies. Some GP surgeries and some pharmacies will be able to offer this whereas others will redirect to the local services.

The test is simple and painless. It is totally voluntary and completely confidential. It is possible to 'self swab' and an examination is not needed. t happen again?

### **Further reading**

- Pelvic inflammatory disease; NICE CKS, April 2022 (UK access only)
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- Pelvic Inflammatory Disease Guidelines; British Association for Sexual Health and HIV - BASHH (2019)
- Ross J, Guaschino S, Cusini M, et al; 2017 European guideline for the management of pelvic inflammatory disease. Int J STD AIDS. 2018 Feb;29(2):108-114. doi: 10.1177/0956462417744099. Epub 2017 Dec 4.

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Authored by:	Peer Reviewed by: Dr Doug McKechnie, MRCGP	
Originally Published:	Next review date:	Document ID:
19/11/2023	02/06/2023	doc_4487

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