

UNIVERSITY STUDENT HEALTH SERVICES • Fact Sheet

PELVIC INFLAMMATORY DISEASE (PID)**WHAT IS IT?**

Pelvic inflammatory disease (PID) is an infection of the upper female reproductive system usually initiated by a sexually transmitted organism. Bacteria can enter the body through the cervix (the opening to the uterus) and travel up into the uterus, fallopian tubes, and/or ovaries. The resulting infection can cause permanent damage to the affected reproductive organ(s), leading to complications, such as infertility and chronic pelvic pain. Early diagnosis and treatment are key to decreasing the risk for complications.

WHAT CAUSES IT?

Many types of bacteria can cause PID. Sexually transmitted infections (STIs) are the most common cause, though the specific bacterial cause is often never found.

- STIs lead to PID by disrupting the normal barrier function of the cervical opening. This allows bacteria normally found inside the vagina access to the upper reproductive organs. The reasons why normal vaginal flora cause PID in some women and not others are not yet fully understood.
- Chlamydia and gonorrhea are the most commonly identified pathogens of PID. *Mycoplasma genitalium* is also likely to be a cause in pre-menopausal patients.
- Regardless of the initiating pathogen, PID is considered and treated as a mixed polymicrobial infection.

The greatest risk factor for PID is having vaginal intercourse with multiple partners. Additional risk factors include age < 25, previous STIs or PID, a partner with a STI, and recent surgical abortion or other procedure involving the cervix. However, intrauterine devices (IUDs) do not appear to increase the risk of developing PID.

WHAT ARE THE SYMPTOMS?

PID typically presents acutely, with symptoms developing over several days, though a more gradual presentation over weeks to months can sometimes occur. The severity of symptoms can vary widely.

- Lower abdominal pain is the cardinal presenting symptom of PID, ranging from subtle to severe. The abdominal pain is usually bilateral, constant, achy, and worse with sex.
- Most cases are characterized by mild to moderate abdominal pain. A mild fever and backache may also be present.
- Severe symptoms of PID can include severe abdominal pain, high fevers, shaking chills, nausea, and vomiting.
- Other nonspecific symptoms include abnormal vaginal discharge, frequent urination, and abnormal uterine bleeding (bleeding after intercourse, bleeding between periods, and heavy periods).
- In less common cases, PID has no symptoms. Asymptomatic cases are usually caused by chlamydia.

WHAT ARE POTENTIAL COMPLICATIONS?

The risk of complications increases with the number of episodes and severity of PID; however, asymptomatic PID can also result in complications. Examples include:

- Infertility: Both symptomatic and asymptomatic PID can cause permanent injury to the fallopian tube, leading to blockage and other problems that can make it difficult to become pregnant. Risk factors for infertility include the number of PID episodes, severity of symptoms, presence of chlamydia, and delay in treatment.
- Ectopic pregnancy: Damage to the fallopian tubes can increase the risk of having an ectopic pregnancy (a pregnancy that takes place in the fallopian tube instead of the uterus). An ectopic pregnancy is a medical emergency.
- Chronic pelvic pain: As many as one-third of women with PID suffer from this complication.
- Spread of infection: PID can lead to abscess formation, peritonitis (inflammation of the lining of the abdominal cavity), and/or sepsis (a life-threatening infection of the bloodstream).
- Ovarian cancer: It is unclear if PID increases the risk of ovarian cancer. Some studies show an association between multiple PID episodes and ovarian cancer. Other studies show no overall increased risk.

HOW IS IT DIAGNOSED?

A presumptive clinical diagnosis of PID is made in sexually active individuals based on their symptoms (lower abdominal pain) and physical exam findings (tenderness with palpation of the cervix, uterus, and/or ovaries).

Laboratory tests are used to support the diagnosis of PID, but treatment should not be delayed while awaiting results. Commonly ordered tests include the following:

- Examination of the vaginal discharge with a microscope.
- Testing for gonorrhea and chlamydia (as well as *Mycoplasma genitalium* if testing is available).
- Testing for HIV and syphilis.
- Pregnancy test.
- Other lab tests or imaging studies may be ordered based on symptoms and exam findings.

HOW IS IT TREATED?

Early diagnosis and treatment of PID are key to decreasing the risk of long-term complications, such as infertility and ectopic pregnancy. Treatment is indicated in all sexually active individuals who meet criteria for a presumptive clinical diagnosis of PID. Antibiotics are the cornerstone of treatment and should not be delayed while lab results are pending.

- ❖ **Antibiotics** cure the infection but do not reverse any scarring that may have occurred. Therefore, **if you are sexually active and have symptoms of PID, do not wait and see if they will go away on their own. Seek medical attention early to decrease the risk of permanent damage to the reproductive organs.**
 - Most cases of PID can be safely treated in an outpatient setting. Severe cases of PID may require hospitalization and treatment with intravenous (IV) antibiotics.
 - The standard antibiotic regimen for outpatient treatment provides broad antimicrobial coverage and consists of the following 3 components:
 - An intramuscular injection of a cephalosporin antibiotic (eg. ceftriaxone) in clinic.
 - Doxycycline 100mg taken twice daily by mouth for 14 days.
 - Metronidazole 500mg taken twice daily by mouth for 14 days.
 - It is important to complete the full course of antibiotics even if you are feeling better. Call your healthcare provider if you are having problems taking the antibiotics.
- ❖ **Follow-up** is essential!
 - You should return to clinic 48-72 hours after starting treatment and again in 7-10 days, sooner if symptoms are not improving.
 - All sexual partners within the last 2 months should be evaluated and treated, even if they are not experiencing any symptoms.
 - Abstain from sex for at least 7 days after you and your partner(s) have completed treatment.
- ❖ **Self-care**
 - Rest, and drink plenty of non-caffeinated fluids.
 - For relief of abdominal pain, try sitting in a warm tub of water or placing a hot water bottle or heating pad on your lower abdomen.
 - Take acetaminophen (Tylenol) or ibuprofen (Motrin or Advil) for fever or pain. Ibuprofen should be taken with food to avoid an upset stomach.
- ❖ **CALL YOUR HEALTHCARE PROVIDER IMMEDIATELY if you have any worsening symptoms, such as increasing abdominal pain, fever, and/or vaginal bleeding.**

HOW CAN PID BE PREVENTED?

Since PID is usually caused by an STI, practicing safe sex is key!

- Know your partner. Avoid sex with casual partners and strangers. Share your sexual histories with each other before becoming intimate.
- Limit your number of partners. Having multiple partners is the greatest risk factor for PID.
- Use latex barriers (ie. condoms, dental dams, finger cots). Using condoms consistently and correctly is known to significantly reduce the risk of PID and its complications. Use of a barrier from the beginning to the end of skin contact provides the best protection. Substitute a polyurethane condom if latex sensitivity is an issue.
- Get regular STI screens. Sexually active individuals without symptoms should complete STI screening at least once a year. If you have STI symptoms, seek evaluation and treatment early.

RECOMMENDED WEBSITES: www.cdc.gov, www.mayoclinic.org