CONDITION

Adenomyosis

Learn how adenomyosis can cause heavy, painful periods, how it is diagnosed, and which medicines, procedures, and surgeries may help.

WHAT IT IS
Uterine-lining-like tissue growing within uterine muscle

BODY SYSTEM
Reproductive system

MAIN SYMPTOMS
Heavy menstrual bleeding, painful periods, pelvic pain, bloating

WHAT CAUSES IT
Not fully understood

HOW IT IS DIAGNOSED
Pelvic ultrasound, MRI, examination after hysterectomy

MAIN TREATMENT
Symptom-relieving medicines, procedures, or hysterectomy

CAN IT BE CURED?
Yes, hysterectomy removes the uterus

IS IT AN EMERGENCY?
Sometimes, very heavy bleeding with fainting

LONG-TERM OUTLOOK
Symptoms often improve after menopause but may recur

Overview

Adenomyosis is a condition in which tissue similar to the lining of the uterus grows within the muscular wall of the uterus. This tissue responds to menstrual hormones. It can thicken and bleed during the menstrual cycle, causing inflammation and enlargement of the uterus.

Adenomyosis is not cancer and is not considered a precancerous condition. However, it can cause heavy menstrual bleeding, painful periods, ongoing pelvic pain, and iron-deficiency anemia. These problems can affect sleep, work, exercise, sexual activity, and emotional well-being.

Adenomyosis is different from endometriosis. In endometriosis, tissue similar to the uterine lining grows outside the uterus, such as on the ovaries or other pelvic structures. Adenomyosis grows within the uterine muscle. A person can have both conditions. Adenomyosis can also

occur with uterine fibroids, which are noncancerous growths made from muscle and connective tissue.

Some people have adenomyosis without symptoms. Others have symptoms severe enough to need treatment. Modern ultrasound and magnetic resonance imaging, or MRI, often allow doctors to identify adenomyosis without surgery.

Symptoms

Symptoms vary widely. They may remain stable, come and go, or become more noticeable over time.

Possible symptoms include:

Heavy bleeding may mean needing to change menstrual products more often than usual, using more than one type of protection, waking during the night to change protection, or bleeding through clothing or bedding. Keeping a record of bleeding, pain, and menstrual product use can help a clinician understand the pattern.

Symptoms of adenomyosis overlap with those of fibroids, endometriosis, uterine polyps, bleeding disorders, pregnancy-related conditions, and other causes of abnormal uterine bleeding. Symptoms alone cannot confirm the diagnosis.

- Heavy or prolonged menstrual bleeding
- Strong menstrual cramps
- Pelvic pain or pressure between periods
- Abdominal fullness or bloating
- Pain during sex
- Passing blood clots during a period
- Tiredness, weakness, headaches, or shortness of breath related to anemia
- Tenderness or enlargement of the uterus found during a pelvic examination

Causes and risk factors

The exact cause of adenomyosis is not known. Several processes may contribute. Cells from the uterine lining may move into the muscle through the border between these tissues. Other theories suggest that misplaced cells begin developing within the uterine wall before birth or that tissue repair after childbirth or uterine injury plays a role.

Adenomyosis is sensitive to hormones, including estrogen. Symptoms often improve after menopause, when natural estrogen levels fall. Improvement is not immediate or guaranteed, and bleeding after menopause always needs medical evaluation.

Factors associated with adenomyosis include:

These are associations, not direct causes. A person can develop adenomyosis without any of them, and having one or more does not mean adenomyosis will develop.

Researchers are still studying how adenomyosis affects fertility. It is sometimes found during an evaluation for difficulty becoming pregnant, but age, endometriosis, fibroids, and other factors may also affect fertility.

- Being in the later reproductive years, although it can occur in younger people
- Previous pregnancy and childbirth
- Previous uterine procedures, such as cesarean birth or surgery to remove fibroids
- Endometriosis
- Uterine fibroids

Diagnosis

There is no single symptom or routine blood test that proves someone has adenomyosis. Diagnosis usually combines the medical history, a physical examination, imaging, and tests for other causes of bleeding or pain.

A clinician may ask about the timing and amount of bleeding, pelvic pain, pregnancy history, medicines, contraception, and plans for future pregnancy. During a pelvic examination, the uterus may feel enlarged, rounded, tender, or softer than expected. A normal examination does not rule out adenomyosis.

Testing may include:

For many years, adenomyosis could be confirmed only by examining the uterus after a hysterectomy. A hysterectomy is surgery to remove the uterus. Although examination of removed tissue remains the most certain confirmation, treatment can usually be based on symptoms and imaging without requiring hysterectomy.

The evaluation may also look for fibroids, endometriosis, polyps, infection, thyroid disease, medication effects, and disorders that affect blood clotting.

- Pregnancy testing: Pregnancy-related bleeding and pain require a different evaluation.

- Blood tests: A complete blood count can look for anemia. Ferritin or other iron studies may be used to check the body's iron stores.
- Pelvic ultrasound: A transvaginal ultrasound uses a slender probe placed in the vagina to create detailed images. It is often the first imaging test when adenomyosis is suspected. An abdominal ultrasound may also be used.
- MRI: MRI provides detailed images of the uterine wall. It may be helpful when ultrasound results are uncertain, when fibroids are also present, or when planning a procedure.
- Endometrial sampling: A clinician may take a small sample from the uterine lining when needed to investigate abnormal bleeding. This test can identify changes in the lining, including cancer, but it usually does not confirm adenomyosis because adenomyosis lies deeper in the muscle.

Treatment and management

Treatment depends on how much the symptoms interfere with daily life, whether anemia is present, plans for pregnancy, other health conditions, and personal preferences. Adenomyosis without troublesome symptoms may not require treatment.

Medicines can reduce symptoms but do not permanently remove adenomyosis.

Nonsteroidal anti-inflammatory drugs like ibuprofen or naproxen , or NSAIDs, can reduce menstrual cramps and pelvic pain. Some people begin them shortly before an expected period. These medicines are not suitable for everyone, so a clinician or pharmacist should review other medicines and any history of stomach, kidney, heart, or bleeding problems.

Tranexamic acid is a nonhormonal medicine taken during menstrual bleeding to reduce blood loss. It does not provide contraception or treat pain directly. A clinician considers personal and family histories of blood clots and possible medicine interactions before prescribing it.

Hormonal treatments can make periods lighter, less painful, or less frequent. Options may include combined hormonal contraceptive pills, patches, or vaginal rings; progestin-only pills or injections; and a levonorgestrel-releasing intrauterine system. An intrauterine system is a small device placed inside the uterus that releases a progestin hormone. Irregular bleeding can occur during the first months of hormonal treatment.

Specialists sometimes use medicines that temporarily lower estrogen activity, such as gonadotropin-releasing hormone medicines. These can cause symptoms similar to menopause and loss of bone density, so they are generally used for limited periods or in specific situations. Additional hormone treatment may sometimes be given to reduce side effects.

Iron supplements may be recommended when blood tests show iron deficiency or anemia. Treatment may need to address both the iron deficiency and the ongoing bleeding that caused it.

If medicines do not provide enough relief, procedural options may be discussed:

People hoping to become pregnant should discuss this before starting treatment. Hormonal treatments prevent pregnancy while they are being used, and some procedures may affect the strength of the uterus or future pregnancy safety. A fertility specialist may be helpful when pregnancy is a current goal.

- Uterine artery embolization reduces blood flow to affected uterine tissue. It can improve symptoms in some people, but access and suitability vary. Its effects on future pregnancy need careful discussion.
- Adenomyomectomy removes localized adenomyosis while leaving the uterus in place. Adenomyosis is often spread through the muscle, making complete removal difficult. The procedure can weaken or scar the uterus and requires specialist planning.
- Image-guided thermal treatments use focused ultrasound or other forms of energy to destroy selected tissue. Availability is limited, and evidence about long-term results and future pregnancy is still developing.
- Endometrial ablation destroys the uterine lining to reduce bleeding. It may be less effective when adenomyosis extends deeply into the muscle. It is not intended for people who may want a future pregnancy.
- Hysterectomy is the definitive treatment because it removes the uterus. It ends menstrual bleeding and the ability to carry a pregnancy. The ovaries usually do not need to be removed solely because of adenomyosis, so hysterectomy does not automatically cause menopause.

Complications

Heavy menstrual bleeding can lead to iron deficiency and anemia. Anemia may cause fatigue, weakness, dizziness, headaches, rapid heartbeat, or shortness of breath. Severe anemia sometimes requires urgent treatment.

Persistent pain and bleeding can interfere with work, school, sleep, exercise, relationships, and sex. Chronic symptoms can also affect mood. These effects are medically important and should be included when discussing treatment goals.

Adenomyosis has been associated in research with reduced fertility, miscarriage, premature birth, and some other pregnancy complications. Much of this evidence comes from

observational studies, and other conditions may contribute. Adenomyosis does not mean that pregnancy is impossible or that complications will occur. People who are pregnant or planning pregnancy can ask whether obstetric or fertility specialist care is appropriate.

Symptoms can return after stopping medicine or after a uterus-preserving procedure because adenomyosis may remain in other parts of the uterine muscle.

Follow up

Routine follow-up helps determine whether bleeding, pain, and anemia are improving. The timing depends on the treatment and symptom severity. A clinician may repeat blood tests if anemia or iron deficiency was present.

At follow-up, discuss medication side effects, changes in bleeding, pain between periods, pain during sex, and whether symptoms still limit normal activities. New bleeding after menopause, bleeding after sex, or a major change in the usual pattern should be evaluated rather than assumed to be adenomyosis.

Arrange prompt medical advice for worsening pain, increasingly heavy bleeding, signs of anemia, or possible medication or procedure complications. Contact the treating team after a procedure if there is fever, worsening pelvic pain, foul-smelling discharge, or bleeding that is heavier than expected.

Seek emergency care for very heavy bleeding accompanied by fainting, marked dizziness, chest pain, shortness of breath, confusion, or severe weakness. Sudden severe pelvic pain, especially with a positive pregnancy test or possible pregnancy, also needs emergency assessment because conditions such as ectopic pregnancy must be ruled out.

Sources

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