TEST

Transvaginal ultrasound

A transvaginal ultrasound uses a slim internal probe to create images of the pelvic organs and early pregnancy.

WHAT IT MEASURES
Pelvic organs, tissues, pregnancy location, and blood flow

SAMPLE
None

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually 15 to 30 minutes

RESULTS IN
Same day to several days; varies by imaging service or laboratory

USED FOR
Diagnosis and monitoring of pelvic and early pregnancy concerns

MAIN LIMITATION
Findings depend on operator skill and what is visible

Overview

A transvaginal ultrasound is an imaging test used to examine structures inside the pelvis. These include the uterus, cervix, ovaries, fallopian tube areas, and surrounding tissues. In pregnancy, it can provide detailed images during the early weeks.

The test uses a slim ultrasound probe placed gently inside the vagina. Sound waves from the probe create images on a screen. It does not use X-rays or ionizing radiation.

Because the probe is close to the pelvic organs, transvaginal ultrasound often provides clearer images than an ultrasound performed over the abdomen. It may be used alone or with a transabdominal ultrasound.

Doppler ultrasound may also be used during the examination. This shows blood flow in pelvic tissues.

Why the test is ordered

A clinician may order this test to investigate symptoms, follow a known condition, or clarify findings from another examination.

Common reasons include:

During early pregnancy, the test may help identify whether a pregnancy is inside the uterus. It can also assess an embryo's development and heartbeat when these would be expected for the stage of pregnancy.

Ultrasound can help investigate possible miscarriage or ectopic pregnancy, which is a pregnancy developing outside the uterus. It cannot always give a definite answer at the first appointment, especially when pregnancy dates are uncertain or the pregnancy is very early.

Transvaginal ultrasound is not generally used to screen people at average risk for ovarian cancer. Its usefulness for screening depends on personal risk and the clinical reason for testing.

- Pelvic pain
- Bleeding between periods or unusually heavy bleeding
- Bleeding after menopause
- Difficulty becoming pregnant
- A suspected ovarian cyst or pelvic mass
- Checking the position of an intrauterine device, or IUD
- Monitoring ovarian follicles during fertility treatment
- Examining the lining of the uterus
- Checking the location and development of an early pregnancy

Who should have the test

The test may be suitable when detailed pelvic images could help explain symptoms or guide care. It is commonly used for pelvic concerns, postmenopausal bleeding, fertility assessment, and early pregnancy evaluation.

You can choose whether to have an internal ultrasound. The person performing it should explain why it has been suggested, what it involves, and what alternatives are available. You can ask questions, request a chaperone, or withdraw consent at any time.

A transabdominal ultrasound may be an alternative, but it does not always provide the same detail. In some situations, MRI, hysteroscopy, blood tests, or repeat ultrasound may be more useful.

Tell the imaging service if you are or might be pregnant. Also mention significant vaginal pain, recent pelvic surgery, concerns related to previous trauma, or anything that may make an internal examination difficult. The team can discuss adjustments or alternatives.

How to prepare

Fasting is not usually needed. You can normally eat, drink, and take your usual medicines unless your appointment instructions say otherwise.

You will often be asked to empty your bladder before the transvaginal part of the examination. An empty bladder usually allows clearer views and makes the test more comfortable.

Sometimes a transabdominal ultrasound is performed first. For that part, you may be asked to arrive with a full bladder. Follow the instructions from your imaging service because the preparation may include both approaches.

Remove a tampon or menstrual cup before the test. Menstruation does not usually prevent the examination.

Wear clothing that is easy to remove from the waist down. Tell the sonographer about allergies, particularly latex sensitivity, because probe covers and other equipment may contain latex.

What happens during the test

You will usually be asked to undress from the waist down and will be given a sheet or gown. You lie on an examination couch, often with your knees bent and legs apart.

The sonographer covers the probe with a protective sheath and applies gel. The probe is then inserted a short distance into the vagina. Some services may allow you to insert it yourself.

The probe is moved gently to view the pelvic organs from different angles. You may feel pressure or mild discomfort, but the test should not be sharply painful. Tell the sonographer if you need them to pause or stop.

Images and measurements are recorded. Doppler may be added to examine blood flow. The examination usually takes about 15 to 30 minutes, although complex assessments can take longer.

You can usually return to normal activities immediately afterward.

Understanding your results

A report may describe the size, shape, position, and appearance of the uterus and ovaries. It may also comment on:

An ultrasound finding does not always identify its cause. For example, many ovarian cysts are related to the menstrual cycle and disappear without treatment. Other findings may need follow-up imaging or a different test.

There is no single normal measurement that applies to everyone. The appearance and thickness of the uterine lining change with age, menstrual cycle stage, menopause, pregnancy, hormone treatment, and medicines such as tamoxifen. Ovarian appearance also changes with age and hormonal activity.

Results must therefore be interpreted using the imaging service's criteria and your clinical context. Relevant factors include age, sex characteristics, pregnancy status, symptoms, medicines, previous surgery, and other test results.

- The uterine lining, called the endometrium
- Fibroids, which are non-cancerous growths of uterine muscle
- Ovarian follicles or cysts
- Masses or unusual areas
- Fluid within the pelvis
- Blood flow
- The position of an IUD
- The location and development of an early pregnancy

What affects the results

A result can be incomplete or misleading even when the equipment is working correctly.

The stage of the menstrual cycle can change the appearance of the uterine lining and ovaries. Hormonal contraception, fertility medicines, menopausal hormone therapy, and tamoxifen can also affect what is seen.

In very early pregnancy, dates based on the last menstrual period may not match the actual timing of ovulation and conception. A scan may therefore show less than expected without proving that something is wrong. Repeat imaging and pregnancy hormone blood tests may be needed.

Other factors that can affect the examination include:

Recent exercise, meals, coffee, and the time of day do not usually change pelvic ultrasound findings in a meaningful way.

- An overly full bladder during the internal scan
- Bowel gas or stool obscuring nearby structures
- The position or tilt of the uterus
- Scar tissue or changed anatomy after surgery
- Difficulty moving the probe because of pain
- Large fibroids or masses blocking the view
- The experience of the person performing and interpreting the scan
- The quality and settings of the ultrasound equipment

Accuracy and limitations

Transvaginal ultrasound gives detailed images of many pelvic structures, but it cannot detect every condition. Very small abnormalities may be missed, and the fallopian tubes are often not visible unless they contain fluid or are enlarged.

Some findings look similar even when their causes are different. A normal ovarian follicle, a pregnancy-related corpus luteum, and certain cysts can resemble one another. Fibroids, polyps, blood clots, and changes in the uterine lining may also require further testing to distinguish them.

Ultrasound may show a mass but cannot always confirm whether it is benign or cancerous. MRI, blood tests, hysteroscopy, or a biopsy may be more appropriate when tissue diagnosis or a wider view is needed.

A normal Doppler blood-flow result does not completely rule out ovarian torsion, meaning twisting of an ovary. Symptoms and the overall clinical assessment remain important.

An early pregnancy scan can miss a pregnancy that is too small to see. It can also create concern when timing is uncertain. Repeat ultrasound after an appropriate interval is often more reliable than drawing conclusions from one early image.

Risks and complications

Transvaginal ultrasound does not use ionizing radiation. Diagnostic ultrasound has no established harmful effects when used appropriately for a medical reason.

The probe may cause temporary pressure or discomfort. Light spotting can occasionally occur, particularly when the cervix or vaginal tissues are sensitive. Infection is very uncommon because the probe is disinfected and covered for each examination.

What happens next

A sonographer may explain what they can see, but a radiologist or another qualified clinician often reviews the images and issues the formal report. Results may be available the same day or within several days.

Routine next steps might include no further action, a follow-up appointment, repeat ultrasound, blood tests, or another type of imaging. Some ovarian cysts and uncertain early pregnancy findings are monitored over time because their meaning becomes clearer with repeat testing.

Seek urgent medical assessment if you have severe or worsening pelvic or abdominal pain, heavy bleeding, fainting, marked dizziness, or shoulder-tip pain, especially if you could be pregnant. These symptoms require clinical assessment even if an earlier ultrasound was normal or inconclusive.

Mild brief discomfort or a small amount of spotting after the test is usually not an emergency. Contact your healthcare service routinely if it continues, worsens, or concerns you.

Common questions

Can I drink coffee before a transvaginal ultrasound?

Yes. Coffee does not usually affect the images. If you need a full bladder for an abdominal scan first, follow the service's drinking instructions.

Do I need a full bladder?

Usually not for the internal scan. You may need a full bladder if a transabdominal ultrasound is planned before it.

Can I have the test during my period?

Yes. Menstruation does not usually prevent the test, although you will need to remove a tampon or menstrual cup.

Can I exercise beforehand?

Yes. Exercise does not usually change the results or make the test less accurate.

Does the time of day matter?

No. The test can generally be performed at any time. Fertility monitoring may be scheduled on a particular cycle day rather than at a particular hour.

Is a transvaginal ultrasound safe in pregnancy?

It does not use ionizing radiation and is commonly used in early pregnancy when medically indicated. The probe remains in the vagina and does not enter the uterus.

Sources

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