PROCEDURE

Vasectomy

A vasectomy is a minor operation that provides permanent contraception by stopping sperm from entering semen.

PURPOSE
Permanent contraception by keeping sperm out of semen

PROCEDURE TYPE
Therapeutic, minimally invasive surgery

WHERE IT IS DONE
Outpatient clinic or operating theatre

ANAESTHESIA
Local; sedation sometimes used

HOW LONG IT TAKES
About 15 to 30 minutes

PREPARATION
Medication review, washing, and arranging support or transport

RECOVERY
Same day; no driving if sedated

MAIN RISKS
Bleeding, infection, ongoing scrotal pain, contraceptive failure

RESULTS
Semen testing usually around 8 to 16 weeks

Overview

A vasectomy is a permanent form of contraception. During the procedure, the two tubes that carry sperm from the testicles, called the vas deferens, are cut or sealed.

Your testicles continue to make testosterone, the main male sex hormone. A vasectomy should not affect erections, sexual desire, orgasm, or your ability to ejaculate. Semen usually looks much the same because sperm make up only a small part of it.

A vasectomy does not work immediately. Sperm can remain in the reproductive tract for weeks. You must use another contraceptive method until a semen test confirms that the procedure has worked.

It does not protect against sexually transmitted infections.

Why the procedure is performed

A vasectomy is performed when someone wants reliable, permanent contraception. It may be suitable if you are certain that you do not want biological children in the future or do not want more children.

It can prevent pregnancy without requiring your partner to use ongoing contraception or undergo a more invasive sterilisation operation. The decision should be voluntary and made without pressure from a partner, family member, or healthcare professional.

Who should and should not have it

A vasectomy may be appropriate if you understand that it is intended to be permanent and are comfortable using another contraceptive method until semen testing confirms success.

It may not be the right choice if you are uncertain about future children. Reversal surgery and fertility treatment may sometimes make pregnancy possible afterward, but they are expensive, invasive, and not guaranteed to work.

The procedure may need to be delayed if you have:

Blood-thinning medicines can increase bleeding risk. They do not always prevent vasectomy, but your healthcare team may need to plan around them. Never stop a prescribed blood thinner like warfarin or apixaban on your own.

Previous scrotal surgery, difficult-to-feel tubes, or certain medical conditions may mean the procedure is better done in an operating theatre or with additional anaesthesia.

- An infection or inflamed skin around the scrotum
- Unexplained testicular pain or swelling
- An illness that makes a planned procedure unsafe
- A bleeding problem that has not been assessed

How to prepare

Your treating facility's own instructions take priority because techniques and anaesthesia plans differ.

Tell the team about your medicines, allergies, bleeding problems, previous surgery, and any implanted medical devices. Ask specifically what to do with aspirin, anticoagulants, and other

medicines that affect bleeding.

You may be asked to wash the scrotal area and trim hair. Do not shave unless instructed, because small skin cuts can raise the risk of infection.

Wear supportive underwear or bring an athletic supporter. If you will receive sedation, arrange for an adult to take you home. Follow any fasting instructions provided for sedation or general anaesthesia; fasting is usually unnecessary for local anaesthetic alone.

What happens during the procedure

You lie on your back while the scrotal skin is cleaned. A local anaesthetic is injected to numb the area. The injection may briefly sting.

The clinician reaches each vas deferens through one or two small cuts or a tiny puncture. A section of each tube may be removed, and the ends are then divided, sealed, clipped, tied, or separated using surrounding tissue. The exact method differs between clinicians.

The skin openings may be closed with dissolving stitches or left to heal without stitches. A dressing may be applied.

You may feel pressure, pulling, or movement, but you should not feel sharp pain. Tell the team if you are uncomfortable so they can give more local anaesthetic.

Recovery and what to expect afterward

Mild aching, tenderness, bruising, and swelling are expected for several days. Supportive underwear and a wrapped cold pack may help. Use pain medicine only as directed by your healthcare team.

You can usually eat normally after local anaesthetic. If you received sedation or general anaesthesia, follow the facility's instructions about food and drink.

Rest on the day of the procedure. Avoid heavy lifting, strenuous exercise, cycling, and activities that worsen discomfort for about a week or for the period your clinician recommends. Sexual activity can usually restart once it feels comfortable, often after several days. Use contraception until your semen test gives clearance.

Do not drive if you received sedation or if pain limits your ability to brake or react safely. Your facility may also ask you not to drive yourself home after local anaesthetic.

Many people return to desk-based work within a few days. Work involving lifting or strenuous activity may require more time off.

Risks and possible complications

Most people recover without a serious problem, but possible complications include:

Further treatment is sometimes needed for persistent pain, infection, a large hematoma, or a vasectomy that has not worked. Rarely, pregnancy can occur even after an earlier semen test showed successful clearance.

Vasectomy is not known to reduce testosterone or cause erectile dysfunction.

- Bleeding under the skin, causing a collection called a hematoma
- Infection at the puncture or incision
- A small inflammatory lump caused by leaked sperm, called a sperm granuloma
- Ongoing or intermittent scrotal pain
- Failure to clear sperm from the semen
- Reconnection of a divided tube, known as recanalisation

Results and follow up

The procedure's success is checked with a post-vasectomy semen analysis. This laboratory test looks for sperm in a semen sample.

Testing is often arranged about 8 to 16 weeks after the operation, although your facility may use a different schedule. Follow its instructions about timing, sample collection, and delivery.

Continue using another contraceptive method until your healthcare team confirms that you can stop. Some people need repeat tests because sperm remain present. If sperm counts do not fall enough or moving sperm are still found, further follow-up or another procedure may be recommended.

Routine follow-up focuses on healing and the semen test result. The removed tube segments do not usually need pathology testing unless there is a specific concern.

Alternatives

A vasectomy is not the only option. Alternatives have different effects, effort, and reliability.

If you are unsure about permanent contraception, a reversible method gives you more flexibility.

- Condoms: Non-surgical and help protect against sexually transmitted infections, but must be used correctly every time
- Partner-controlled contraception: Pills, injections, implants, patches, rings, or intrauterine devices avoid surgery for you, but place the treatment burden and possible side effects on your partner
- Female sterilisation or salpingectomy: Permanent contraception involving abdominal or pelvic surgery, usually with greater procedural risk and recovery than vasectomy
- Fertility-awareness methods: Avoid medicines and procedures, but require careful tracking and avoiding unprotected sex during fertile periods
- Abstinence from penis-in-vagina sex: Prevents pregnancy while maintained, but may not fit everyone's preferences
- Sperm banking before vasectomy: Preserves a possible path to biological parenthood, but storage and later fertility treatment cost money and do not guarantee pregnancy

When to call your healthcare team

Contact your healthcare team promptly if you develop increasing redness, warmth, drainage, fever, worsening pain, or swelling that continues to grow. Also call if the wound opens or you have concerns about your semen test or contraception plan.

Minor bruising, mild swelling, and a dull ache are usually part of routine recovery if they steadily improve.

Seek urgent or emergency care for sudden severe testicular pain, rapidly expanding scrotal swelling, heavy bleeding that does not stop with gentle pressure, fainting, or trouble breathing. These symptoms should not wait for a routine appointment.

Common questions

Will I be asleep?

Usually not. Most vasectomies use local anaesthetic, so you are awake but the scrotum is numb. Sedation or general anaesthesia may be offered in selected situations.

Can I drive home?

Do not drive after sedation or general anaesthesia. After local anaesthetic alone, the facility may still recommend that someone else drive you. Follow its instructions.

How painful is a vasectomy?

The numbing injection can sting briefly. During the procedure, you may feel pressure or pulling. Mild aching and tenderness afterward are common, but severe or worsening pain needs medical advice.

When will I know it worked?

Not on the day of surgery. A semen analysis, usually several weeks later, checks whether sperm are still present. Keep using contraception until you receive formal clearance.

Will sex or ejaculation feel different?

Erections, orgasm, and ejaculation usually feel the same. The amount and appearance of semen generally change very little.

Can a vasectomy be reversed?

Reversal surgery is possible in some cases, but it is more complex than vasectomy and does not guarantee pregnancy. Vasectomy should be chosen as permanent contraception.

Sources

- American Urological Association. Vasectomy Guideline . Published 2012; amended 2015
- Sharlip ID, Belker AM, Honig S, and colleagues. "Vasectomy: AUA Guideline." The Journal of Urology . 2012;188(6 Supplement):2482-2491
- Centers for Disease Control and Prevention. U.S. Selected Practice Recommendations for Contraceptive Use, 2024 . MMWR Recommendations and Reports . 2024;73(4):1-126
- World Health Organization and Johns Hopkins Center for Communication Programs. Family Planning: A Global Handbook for Providers . 4th edition. 2022
- NHS. "Vasectomy (male sterilisation)." NHS health information service