ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

VASECTOMY

A guide for men

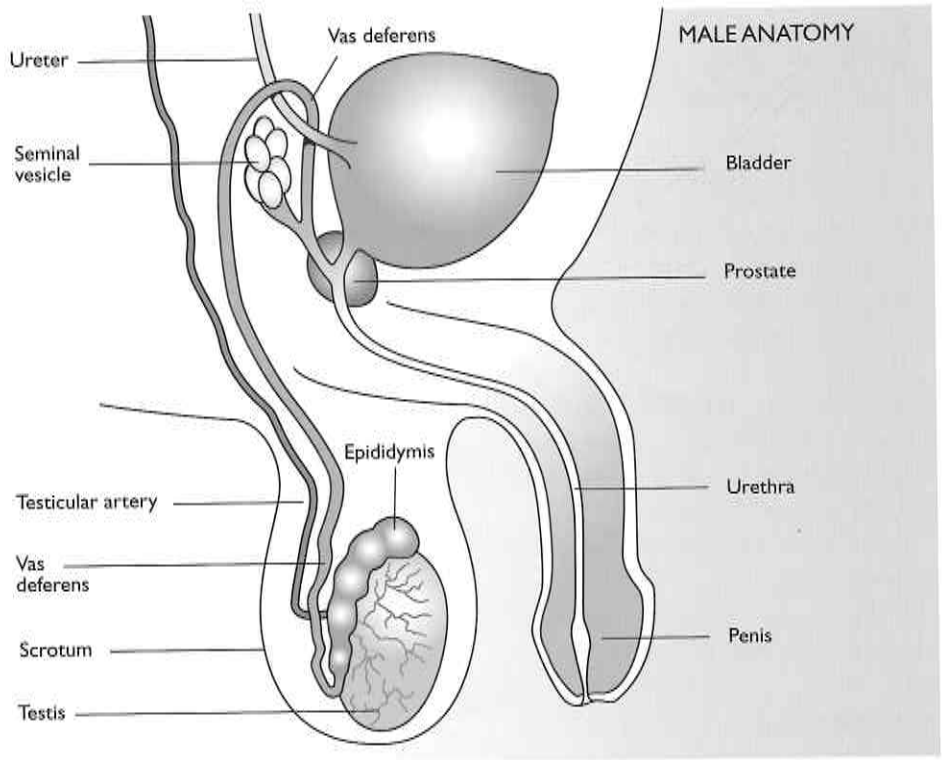
Vasectomy is a surgical procedure to cut or block the tubes (vas deferens) that carry sperm from the testicles. The aim of vasectomy is to prevent sperm from being mixed with semen, the fluid ejaculated during sex. Vasectomy will make a man sterile; that is, unable to father children.

Each testicle produces sperm, which are stored in a nearby structure called the epididymis, as shown in the illustration. The sperm move from the epididymis through a tube called the vas deferens to the prostate gland.

During orgasm, the sperm mix with other fluids produced by the prostate to form semen. After vasectomy, sperm are unable to travel to the prostate and mix with the semen. However, the appearance of the semen is not changed.

Vasectomy is a common surgical procedure, which has been undertaken by millions of men. It is elective; that is, the surgery is a matter of personal choice and is not needed for the maintenance of good health.

Although vasectomy is intended to be a permanent form of contraception, further surgery can be performed in some cases in an attempt to reconnect and restore the function of the vas deferens. However, there is no guarantee that fertility can be restored. See Vasectomy Reversal on page 4.



The testicles produce sperm, which move from the epididymis through the vas deferens to the prostate gland. Sperm mix with fluids produced by the prostate to form semen, which is ejaculated during sex. During vasectomy, the surgeon cuts or blocks the vas deferens to prevent sperm from reaching the semen.

REASONS FOR VASECTOMY

The aim of vasectomy is to provide permanent, safe contraception. It is more reliable than some other methods of birth control, such as condoms or withdrawal, or for women, the contraceptive pill, intrauterine devices (IUDs), diaphragms and related methods of contraception.

For men, vasectomy is less complicated and less expensive than tubal ligation, the permanent method of birth control for women. The surgical risks for men having vasectomy are fewer and less serious than for women having tubal ligation.

A man may be a candidate for vasectomy if:

- he wants to have sex with a minimal chance of causing pregnancy
- he is certain he has fathered all the children he wants to have.

Vasectomy should not be undertaken if a man has any doubts about the decision not to have more children. A husband and wife should discuss the issue of vasectomy with each other.

Although vasectomy can be performed on men of any age, men younger than 25 should be very careful about their decision because of possible changes in their circumstances.

IMPORTANT: FILL IN ALL DETAILS ON THE STICKER BELOW

DEAR SURGEON: When you discuss this pamphlet with your patient, remove this sticker, and put it on the patient's medical history or card. This will remind you and the patient that this pamphlet has been provided. Some surgeons ask the patient to sign the sticker to confirm receipt of the pamphlet.

Your Surgeon

TREATMENT INFORMATION PAMPHLET

PROCEDURE:.....

PATIENT'S NAME:.....

DOCTOR'S NAME:.....

EDITION NUMBER:..... DATE: (day).....(month).....(year).....

Edition number: 4

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TALK TO YOUR SURGEON

The aim of this pamphlet is to provide you with general information. It is not a substitute for advice from your surgeon and does not contain all known facts about vasectomy or every possible side effect of vasectomy. Vasectomy may have other uncommon risks that are not discussed in this pamphlet.

Fully discuss with your surgeon:

- the result you want
- the treatment to be done and why
- the likely outcome you should expect.

If you are not sure about the benefits and risks of treatment, terms used in this pamphlet, or other issues related to vasectomy, ask your surgeon. Read this entire pamphlet carefully, and save it for reference.

Some technical terms are used that may require further explanation by your surgeon. Write down any questions you want to ask. Your surgeon will be pleased to answer them.

This pamphlet should only be used in consultation with your surgeon.

Consent form: If you decide to have surgery, your surgeon will ask you to sign a consent form. Before signing, read it carefully. If you have any questions about it, ask your surgeon.

VASECTOMY AND MASCULINITY

Vasectomy does not stop the production of mature sperm. After vasectomy, mature sperm that enter the epididymis are resorbed by the body.

Vasectomy does not alter the production and release of the male hormone, testosterone. A man's masculine characteristics, such as his beard and voice, do not change.

Vasectomy should not have any physical effect on sexual desire, erections and orgasms, although psychological effects can occur. As sperm make up only one-tenth of the semen, the amount of semen ejaculated is usually not altered noticeably. The appearance of the semen does not change.

VASECTOMY AND STERILITY

You will NOT be sterile immediately after vasectomy. Sperm are still present in the tubing beyond the vasectomy site and can reach the semen.

Ejaculations after vasectomy remove the remaining sperm from the vas deferens. Most men have very low sperm counts after 10 to 15 ejaculations. In some men, sterility takes longer. Your surgeon will arrange examinations of samples of your semen to determine your sperm count. A zero sperm count shows that the vasectomy has been successful.

Until the success of the vasectomy has been confirmed, you may wish to discuss methods of birth control with your surgeon.

Remember: you must continue to use current contraceptive methods until your surgeon tells you that no sperm are present in the semen.

VASECTOMY AND STDs

Although successful vasectomy prevents pregnancy, it does not protect against AIDS and other sexually transmitted diseases (STDs).

In any sexual encounter where there is a risk of contracting or transmitting disease, men should continue to use condoms (even after vasectomy) as a means of protection against infection.

THE DECISION TO HAVE SURGERY

A decision about vasectomy should only be made after discussion with your surgeon. The decision is always yours (or yours as a couple) and should not be made in a rush. Make a decision only when you are satisfied with the information you have received and believe you have been well informed.

Your surgeon will be pleased to discuss the benefits and risks of vasectomy. When making the decision, you must keep in mind that your surgeon cannot guarantee that the vasectomy will be successful or that it bears no risk. Read about the risks of vasectomy on page 4.

Seek the opinion of another surgeon if you are uncertain about the advice you are given.

BEFORE SURGERY

Your surgeon needs to know your medical history to plan the best treatment. Fully disclose any health problems you may have had because some problems may interfere with surgery, anaesthesia or aftercare.

Tell the surgeon if you have had:

- an allergy or bad reaction to antibiotics, anaesthetic drugs, any other medicines, surgical tapes or dressings
- prolonged bleeding or excessive bruising when injured
- previous testicular surgery or hernia repair, as scar tissue can complicate vasectomy
- recent or long-term illness
- psychological distress or psychiatric illness.

Give the surgeon a list of ALL medicines you are taking or have recently taken. Include medicines prescribed by your family doctor and those bought "over the counter" without prescription. Include long-term treatments such as insulin.

As some medicines and supplements increase the risk of excessive bleeding during and after surgery, tell your surgeon if you take aspirin, medicines containing aspirin (such as some cough syrups), Plavix (or similar medicines), warfarin, anti-inflammatory medications (such as ibuprofen), vitamin E, herbal medications, fish oil or garlic tablets. Seek the advice of your surgeon about whether the dose should be changed or the medication stopped for a period. Discuss this carefully with your surgeon.

Some surgeons recommend shaving part or all of the scrotum on the morning of surgery. Other surgeons will carry out the shave as part of the vasectomy.

Many men schedule their vasectomy for a Friday. Most are able to return to work the following Monday. However, this cannot be guaranteed.

Arrange for someone to drive you home after the surgery. Do not drive home if you have had a general anaesthetic.

ANAESTHESIA

Vasectomy may be carried out under general anaesthesia or local anaesthesia. With local anaesthesia, injections are used to numb the surgical site, and you will be awake. Discuss these two options with your surgeon.

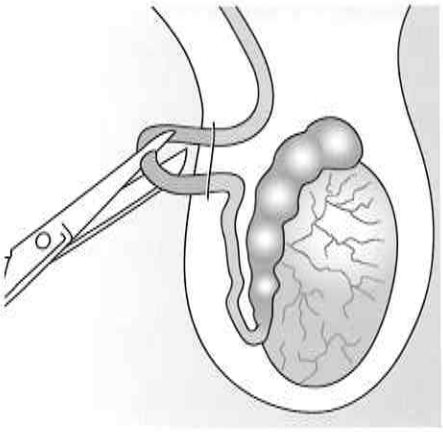
Modern anaesthesia is safe and effective, but does have risks. Rarely, side effects from a general anaesthetic can be life threatening. Ask your anaesthetist for more information.

SURGICAL METHODS

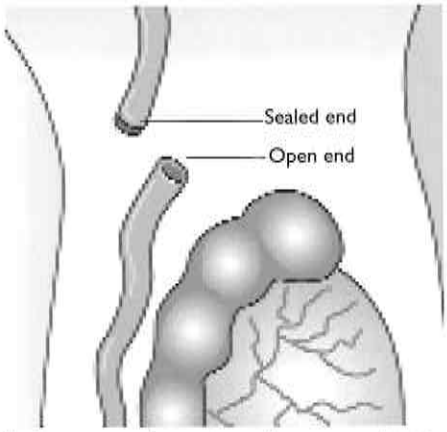
Vasectomy typically takes between 15 and 30 minutes in a hospital, clinic or doctor's surgery. The location of incisions and the technique used will depend on your surgeon's recommendations and your preferences. The main methods of vasectomy are as follows.

The conventional approach: The surgeon makes a small cut in the skin of the scrotum. An instrument is inserted that brings the vas deferens through the opening to the surface of the scrotum. The surgeon cuts the vas deferens and may remove a small length to further reduce the risk of spontaneous reconnection.

Cautery, clips or sutures are applied to seal the cut ends of the vas deferens. Some surgeons sew a layer of tissue between the cut ends to minimise the risk of spontaneous reversal. Stitches are used to close the incision in the scrotum. The surgeon repeats the procedure on the other side.



In the conventional approach, the surgeon cuts the vas deferens and seals the ends using sutures, clips or cautery to prevent the passage of sperm to the semen.



In the open-end vasectomy, the surgeon leaves the vas deferens on the testicular side unsealed.

No-scalpel vasectomy: The surgeon feels for the vas deferens under the skin of the scrotum and holds it in place with a small clamp. An instrument punctures the skin and stretches the opening.

The surgeon pulls the vas deferens through the opening and cuts or blocks the tube as in the conventional approach. The punctures heal well and typically need no stitches.

Open-end vasectomy: After cutting the vas deferens, the surgeon leaves the testicular end open. Both conventional and no-scalpel techniques can incorporate open-ended vasectomy. This technique may reduce pain in and around the testicles after vasectomy.

RECOVERY AFTER SURGERY

To check that no serious bleeding occurs immediately after the vasectomy, your surgeon may ask you to remain at the hospital or clinic for a while. Ensure that you have the emergency telephone number of your surgeon and the hospital or clinic in case you need to contact them. Take things very easy for at least the first day.

Incision and stitches: Use a gauze pad inside supportive underpants to cover the incisions. These may be needed for a day or two, or at least until oozing stops. Your surgeon will give instructions on special care, bathing and showering.

Stitches usually dissolve over time but can be removed in seven to 10 days.

Swelling and bruising: Swelling and bruising are normal and can be kept to a minimum by wearing firm, supportive underwear and applying ice packs. Swelling and bruising usually resolve over the first two weeks.

Pain and discomfort: Most men report that pain and discomfort in the first few days after surgery are minor. It is typically described as a dull ache in the testicles. Pain usually eases and fades during the first week. Paracetamol is usually sufficient to relieve pain. If you need stronger pain relief, tell your surgeon.

RESUMING ACTIVITIES

Avoid vigorous exercise and heavy lifting for the first week. Overexertion may lead to increased swelling and soreness.

You may resume strenuous activity, such as running, usually after two weeks. Undertake vigorous sports and activity when swelling and discomfort have subsided, and it is comfortable to do so. Resume physically demanding sports, such as rugby or tennis, gradually and carefully.

Resumption of sexual activity: You may resume sexual intercourse when you are reasonably free of discomfort. First, use a proven method of birth control until the surgeon tells you that your semen no longer contains any live sperm. Your surgeon will arrange follow-up appointments to check the sperm count in samples of your semen.

Remember that pregnancy can still occur until ALL live sperm are eliminated from the semen. Some surgeons recommend multiple semen analyses to check clearance of live sperm. Other surgeons accept that you will be highly likely to be infertile if a single count shows no live sperm.

CONTACT YOUR SURGEON

Tell your surgeon if you have any of these problems after surgery:

- fever (with a temperature of more than 38°C) or chills
- heavy bleeding from any incision
- increasing swelling of the scrotum or swelling around the surgical sites
- increasing pain
- redness spreading from incision points
- any other concerns regarding your surgery.

COSTS OF TREATMENT

Your surgeon can advise you about coverage by Medicare and private health insurance and out-of-pocket costs. Ask for an estimate of medical and hospital fees. This is an estimate because the actual treatment may differ from that proposed. If further treatment is needed because of complications, extra costs are likely to apply. It is best to discuss costs before treatment rather than afterwards.

POSSIBLE COMPLICATIONS OF VASECTOMY

As with all surgical procedures, vasectomy does have risks, despite the highest standards of practice. While your surgeon makes every attempt to minimise risks, complications can occur that may have permanent effects.

It is not usual for a surgeon to outline every possible side effect or rare complication of a surgical procedure. However, it is important that you have enough information about possible complications to fully weigh up the benefits and risks of surgery.

The following possible complications are listed to inform and not to alarm you. There may be others that are not listed.

Infection of the incision and nearby tissues can cause localised swelling and tenderness that may require treatment with antibiotics.

Blood can accumulate in the skin of the scrotum and cause swelling and bruising. The body will resorb small amounts. Larger amounts may need to be drained by the surgeon. Rarely, this may require further surgery.

Fluid can accumulate in the scrotum causing pain and swelling (hydrocele). The body will resorb small amounts of fluid.

Sperm can leak from the cut ends of the vas deferens into surrounding tissues to form small, tender or painful lumps (sperm granuloma) under the skin of the scrotum. These usually resolve without further treatment. Some men may need to take anti-inflammatory medication. Rarely, further surgery may be necessary.

Epididymitis or orchitis (painful, swollen, and tender epididymis or testicles) is somewhat more common in men who have had a vasectomy. This local inflammation occurs most often during the first year after surgery. Treated with heat and/or antibiotics, it usually clears up within a week.

Chronic pain: Some men complain of persistent discomfort of the scrotum, while others have pain during intercourse and ejaculation. Surgical obstruction of the epididymal portion of the vas deferens in conventional and no-scalpel vasectomies can lead to increased pressure in the epididymis. The sperm, unable to leave the epididymis, cause the tubing to distend. Anti-inflammatory drugs may reduce the inflammation and relieve the symptoms. However, further surgical intervention may be needed to reverse the vasectomy or remove the epididymis. The surgeon cannot guarantee that this will relieve pain. Although open-end vasectomy reduces the risk of chronic epididymal pain, sperm granulomas form more easily with this technique.

Vasectomy failure: The cut ends of the vas deferens can rejoin months or years after vasectomy, so that sperm can again reach the semen and cause pregnancy. The clearance of all sperm from the ejaculate can take months. Vasectomy failure can occur even after a completely negative sperm count.

Psychological response: Occasionally, some men may experience sexual difficulties after a vasectomy. These have an emotional basis rather than a physical cause and may require counselling.

Vasectomy and the prostate gland: Some studies have suggested that men who have had a vasectomy may have a higher risk of developing prostate cancer, but other studies have not confirmed this. No biological explanation of the proposed link has so far been identified. Current opinion suggests no increase in risk. Some surgeons recommend regular examinations for prostate cancer, especially for men older than 50.

Immune reactions to sperm: Sperm do not usually come into contact with the body's immune cells, so they do not usually cause an immune response.

However, vasectomy disrupts the barrier that separates the immune cells from sperm cells, and a man may develop sperm antibodies (specialised proteins that attack sperm cells) after undergoing the procedure.

There is no conclusive evidence that men with vasectomies are more likely to develop immune-related disease. However, these antibodies can inactivate sperm, and this reduces the chance of pregnancy after a vasectomy reversal.

Heart disease: While some research showed an increased risk of diseased heart arteries (atherosclerosis) in vasectomised animals, recent studies have found no evidence that men are more likely to develop heart disease or heart attacks after vasectomy.

VASECTOMY REVERSAL

Vasectomy reversal is a surgical procedure that attempts to rejoin the ends of the vas deferens so the flow of sperm to the prostate is restored.

Men may undergo vasectomy reversal because:

- they regret their decision to have a vasectomy, or
- there has been a change in their personal circumstances, such as divorce, remarriage or the death of a child.

Vasectomy is difficult to reverse reliably because of changes that often occur in the epididymis and vas deferens. Blocking or cutting the vas deferens produces tissue damage and scarring that reduces the chance of a successful reversal.

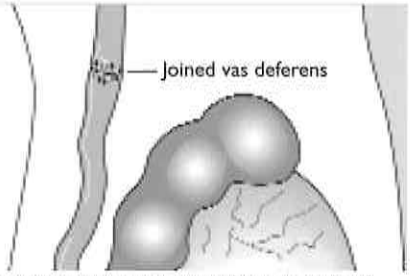
If a length of vas deferens was removed, the chances of a successful reversal are greatly reduced.

Successful rejoining of the vas deferens will not restore fertility if an immune response to sperm (caused by the vasectomy) is inactivating the sperm.

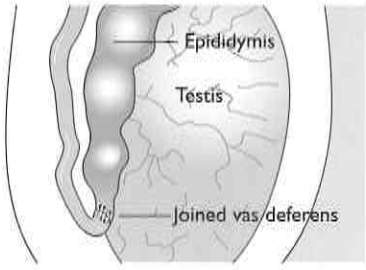
The procedure may take several hours because of the difficulty involved. Your surgeon cannot guarantee that vasectomy reversal will be successful. It usually requires admission to a hospital.

There are two methods of vasectomy reversal:

1. Vasovasostomy: The surgeon unblocks the obstructions and stitches together the cut ends of the vas deferens.
2. Vasoepididymostomy: The surgeon stitches the end of the vas deferens directly to the epididymis to bypass damaged or blocked tubing.



In vasovasostomy, rejoining the two ends of the vas deferens restores the flow of sperm from the testicles.



Vasoepididymostomy joins the vas deferens directly to epididymis.

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