

# Vasectomy

## Key Points for Providers and Clients

- **Permanent.** Intended to provide life-long, permanent, and very effective protection against pregnancy. Reversal is usually not possible.
- **Involves a safe, simple surgical procedure.**
- **3-month delay in taking effect.** The man or couple must use condoms or another contraceptive method for 3 months after the vasectomy.
- **Does not affect male sexual performance.**

## What Is Vasectomy?

- Permanent contraception for men who will not want more children.
- Through a puncture or small incision in the scrotum, the provider locates each of the 2 tubes that carries sperm to the penis (vas deferens) and cuts or blocks them by cutting and tying them closed or by applying heat or electricity (cautery).
- Also called male sterilization and male surgical contraception.
- Works by closing off each vas deferens, keeping sperm out of semen. Semen is ejaculated, but it cannot cause pregnancy.

## How Effective?

*One of the most effective methods but carries a small risk of failure:*

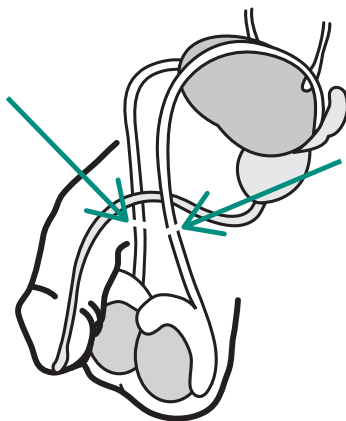
- Among the partners of men who have vasectomies, far less than 1 in every 100 will become pregnant in the first year of use of the method. In fact, less than 2 women in every 1,000 will become pregnant. This means that 998 or 999 of 1,000 women whose partners have had vasectomy will not become pregnant.
- Sometimes men can have their semen examined at 3 months after the procedure to see if it still contains sperm. If no sperm is found, 1 woman in every 1,000 of these men's partners will become pregnant in the first year.



- Among partners of men who do not have their semen examined, pregnancies are slightly more common, but still less than 2 per 1,000 women.

- Vasectomy is not fully effective for 3 months after the procedure.

- Some pregnancies occur within the first year because the couple does not use condoms or another effective method consistently and correctly in the first 3 months, before the vasectomy is fully effective.



- A small risk of pregnancy remains beyond the first year after the vasectomy and until the man's partner reaches menopause.
  - Over 3 years of use: About 4 pregnancies per 1,000 women
- If the partner of a man who has had a vasectomy becomes pregnant, it may be because:
  - The couple did not always use another method during the first 3 months after the procedure
  - The provider made a mistake
  - The cut ends of the vas deferens grew back together

*Fertility does not return because vasectomy generally cannot be stopped or reversed. The procedure is intended to be permanent. Reversal surgery is difficult, expensive, and not available in most areas. When performed, reversal surgery often does not lead to pregnancy (see Question 7, p. 244).*

*Protection against sexually transmitted infections (STIs): None*

### Why Some Men Say They Like Vasectomy

- Is safe, permanent, and convenient
- Has fewer side effects and complications than many methods for women
- The man takes responsibility for contraception—takes burden off the woman
- Increases enjoyment and frequency of sex

# Side Effects, Health Benefits, Health Risks, and Complications

## Side Effects

None

### Known Health Benefits

- Helps protect against risks of pregnancy in a partner

### Known Health Risks

None

## Complications (see also Managing Any Problems, p. 242)

Uncommon to rare:

- Severe scrotal or testicular pain that lasts for months or years (see Question 2, p. 243).

Uncommon to very rare:

- Infection at the incision site or inside the incision (uncommon with conventional incision technique; very rare with no-scalpel technique; see Vasectomy Techniques, p. 238).

Rare:

- Bleeding under the skin that may cause swelling or bruising (hematoma).

## Correcting Misunderstandings (see also Questions and Answers, p. 243)

Vasectomy:

- Does not remove the testicles. In vasectomy the tubes carrying sperm from the testicles are blocked. The testicles remain in place.
- Does not decrease sex drive.
- Does not affect sexual function. A man's erection is as hard, it lasts as long, and he ejaculates the same as before.
- Does not cause a man to grow fat or become weak, less masculine, or less productive.
- Does not cause any diseases later in life.
- Does not prevent transmission of sexually transmitted infections, including HIV.

# Who Can Have a Vasectomy

## Safe for All Men

With proper counseling and informed consent, any man can have a vasectomy safely, including men who:

- Have no children or few children
- Are married or are not married
- Do not have wife's permission
- Are young
- Have sickle cell disease
- Are at high risk of infection with HIV or another STI
- Are living with HIV, whether or not on antiretroviral therapy (see Vasectomy for Men with HIV, p. 236).

In some of these situations, especially careful counseling is important to make sure the man will not regret his decision (see Female Sterilization, Because Sterilization Is Permanent, p. 220).

## Avoid Unnecessary Procedures

(see Importance of Procedures, p. 368)

Men can have vasectomy:

- Without any blood tests or routine laboratory tests
- Without a blood pressure check
- Without a hemoglobin test
- Without a cholesterol or liver function check
- Even if the semen cannot be examined by microscope later to see if it still contains sperm.

A genital examination should be conducted before performing vasectomy.



## Medical Eligibility Criteria for Vasectomy

**All men can have vasectomy.** No medical conditions prevent a man from using vasectomy. This checklist asks the client about known medical conditions that may limit when, where, or how the vasectomy procedure should be performed. Ask the client the questions below. If he answers “no” to all of the questions, then the vasectomy procedure can be performed in a routine setting without delay. If he answers “yes” to a question below, follow the instructions, which recommend caution, delay, or special arrangements.

In the checklist below:

- **Caution** means the procedure can be performed in a routine setting but with extra preparation and precautions, depending on the condition.
- **Delay** means postpone vasectomy. These conditions must be treated and resolved before vasectomy can be performed. Give the client another method to use until the procedure can be performed.
- **Special** means special arrangements should be made to perform the procedure in a setting with an experienced surgeon and staff, equipment to provide general anesthesia, and other backup medical support. For these conditions, the capacity to decide on the most appropriate procedure and anesthesia regimen also is needed. Help the client choose another method\* to use until the procedure can be performed.

### I. Do you have any problems with your genitals, such as infections, swelling, injuries, or lumps on your penis or scrotum? If so, what problems?

- ☐ NO    ☐ **YES** If he has any of the following, use **caution**:
- Previous scrotal injury
  - Swollen scrotum due to swollen veins or membranes in the spermatic cord or testes (large varicocele or hydrocele)
  - Undescended testicle—one side only. (Vasectomy is performed only on the normal side. Then, if any sperm are present in a semen sample after 3 months, the other side must be done, too.)

*(Continued on next page)*

\* Backup methods include abstinence, male and female condoms, spermicides, and withdrawal. Tell him that spermicides and withdrawal are the least effective contraceptive methods. If possible, give him condoms.

## Medical Eligibility Criteria for Vasectomy (continued)

- ▶ If he has any of the following, **delay** vasectomy:
  - Active sexually transmitted infection
  - Swollen, tender (inflamed) tip of the penis, sperm ducts (epididymis), or testicles
  - Scrotal skin infection or a mass in the scrotum
- ▶ If he has any of the following, make **special** arrangements:
  - Hernia in the groin. (If able, the provider can perform the vasectomy at the same time as repairing the hernia. If this is not possible, the hernia should be repaired first.)
  - Undescended testicles—both sides

### 2. Do you have any other conditions or infections? If so, what?

- ☐ NO    ☐ **YES** If he has the following, use **caution**:
- Diabetes
  - Depression
  - Young age
  - Lupus with positive (or unknown) antiphospholipid antibodies or on immunosuppressive treatment
- ▶ If he has any of the following, **delay** vasectomy:
- Systemic infection or gastroenteritis
  - Filariasis or elephantiasis
- ▶ If he has any of the following, make **special** arrangements:
- HIV with advanced or severe clinical disease (see Vasectomy for Men With HIV, below)
  - Blood fails to clot (coagulation disorders)
  - Lupus with severe thrombocytopenia

## Vasectomy for Men With HIV

- Men who are living with HIV or are on antiretroviral (ARV) therapy can safely have a vasectomy. Special arrangements are needed to perform vasectomy on a man who has advanced or severe clinical disease.
- Vasectomy does not prevent transmission of HIV.
- Urge these men to use condoms in addition to vasectomy. Used consistently and correctly, condoms help prevent transmission of HIV and other STIs.
- No one should be coerced or pressured into getting a vasectomy, and that includes men with HIV.

# Providing Vasectomy

## When to Perform the Procedure

- Any time a man requests it (if there is no medical reason to delay).

## Ensuring Informed Choice

**IMPORTANT:** A friendly counselor who listens to a man's concerns, answers his questions, and gives adequate, clear and practical information about the procedure—especially its permanence—will help a man make an informed

choice and be a successful and satisfied user, without later regret (see Female Sterilization, Because Sterilization Is Permanent, p. 220). Involving his partner in counseling can be helpful but is not necessary or required.



### The 7 Points of Informed Consent

Counseling must cover all 7 points of informed consent. In some programs the client and the counselor sign an informed consent form. To give informed consent to vasectomy, the client must understand the following points:

1. Temporary contraceptives also are available to the client.
2. Voluntary vasectomy is a surgical procedure.
3. There are certain risks of the procedure as well as benefits. (Both risks and benefits must be explained in a way that the client can understand.)
4. If successful, the procedure will prevent the client from ever having any more children.
5. The procedure is considered permanent and probably cannot be reversed.
6. The client can decide against the procedure at any time before it takes place (without losing rights to other medical, health, or other services or benefits).
7. The procedure does not protect against sexually transmitted infections, including HIV.

## Vasectomy Techniques

### Reaching the Vas: No-Scalpel Vasectomy

No-scalpel vasectomy is the recommended technique for reaching each of the 2 tubes in the scrotum (vas deferens) that carries sperm to the penis. It is becoming the standard around the world.

Differences from conventional procedure using incisions:

- Uses one small puncture instead of 1 or 2 incisions in the scrotum.
- No stitches required to close the skin.
- Special anesthesia technique needs only one needle puncture instead of 2 or more.

Advantages:

- Less pain and bruising and quicker recovery.
- Fewer infections and less collection of blood in the tissue (hematoma).
- Total time for the vasectomy has been shorter when skilled providers use the no-scalpel approach.

Both no-scalpel and conventional incision procedures are quick, safe, and effective.

### Blocking the Vas

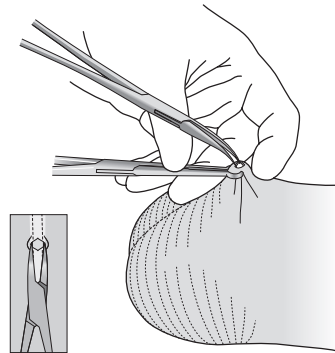
For most vasectomies ligation and excision is used. This entails cutting and removing a short piece of each tube and then tying both remaining cut ends of the vas. This procedure has a low failure rate. Applying heat or electricity to the ends of each vas (cauterizing) has an even lower failure rate than ligation and excision. The chances that vasectomy will fail can be reduced further by enclosing a cut end of the vas, after the ends have been tied or cauterized, in the thin layer of tissue that surrounds the vas (fascial interposition). If training and equipment are available, cautery and/or fascial interposition are recommended. Blocking the vas with clips is not recommended because of higher pregnancy rates.

# Performing the Vasectomy Procedure

## Explaining the Procedure

A man who has chosen a vasectomy needs to know what will happen during the procedure. The following description can help to explain the procedure to him. Learning to perform a vasectomy takes training and practice under direct supervision. Therefore, this description is a summary and not detailed instructions.

1. The provider uses proper infection-prevention procedures at all times (see *Infection Prevention in the Clinic*, p. 376).
2. The man receives an injection of local anesthetic in his scrotum to prevent pain. He stays awake throughout the procedure.
3. The provider feels the skin of the scrotum to find each vas deferens—the 2 tubes in the scrotum that carry sperm.
4. The provider makes a puncture or incision in the skin:
  - Using the no-scalpel vasectomy technique, the provider grasps the tube with specially designed forceps and makes a tiny puncture in the skin at the midline of the scrotum with a special sharp surgical instrument.
  - Using the conventional procedure, the provider makes 1 or 2 small incisions in the skin with a scalpel.
5. The provider lifts out a small loop of each vas from the puncture or incision. Most providers then cut each tube and tie one or both cut ends closed with thread. Some close off the tubes with heat or electricity. They may also enclose one end of the vas in the thin layer of tissue that surrounds the vas (see *Vasectomy Techniques*, previous page).
6. The puncture is covered with an adhesive bandage, or the incision may be closed with stitches.
7. The man receives instructions on what to do after he leaves the clinic or hospital (see *Explaining Self-Care for Vasectomy*, next page). The man may feel faint briefly after the procedure. He should stand first with help, and he should rest for 15 to 30 minutes. He usually can leave within an hour.



# Supporting the User

## Explaining Self-Care for Vasectomy

**Before the procedure the man should**

- Wear clean, loose-fitting clothing to the health facility.

**After the procedure the man should**

- Rest for 2 days if possible.
- If possible, put cold compresses on the scrotum for the first 4 hours, which may decrease pain and bleeding. He will have some discomfort, swelling, and bruising. These should go away within 2 to 3 days.
- Wear snug underwear or pants for 2 to 3 days to help support the scrotum. This will lessen swelling, bleeding, and pain.
- Keep the puncture/incision site clean and dry for 2 to 3 days. He can use a towel to wipe his body clean but should not soak in water.
- Not have sex for at least 2 to 3 days.
- Use condoms or another effective family planning method for 3 months after the procedure. (The previously recommended alternative, to wait for 20 ejaculations, has proved less reliable than waiting 3 months and is no longer recommended.)

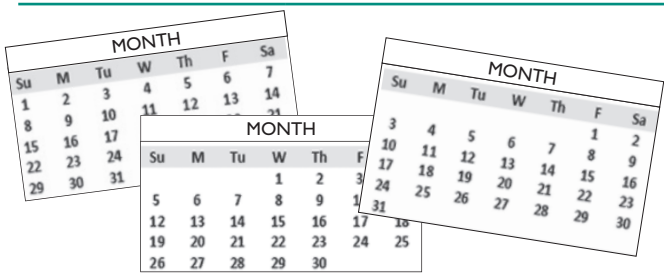


**What to do about the most common problems**

- Discomfort in the scrotum usually lasts 2 to 3 days. Suggest ibuprofen (200–400 mg), paracetamol (325–1000 mg), or other pain reliever. He should not take aspirin, which slows blood clotting.

**Plan the follow-up visit**

- Ask him to return in 3 months for semen analysis, if available (see Question 4, p. 244).
- No man should be denied a vasectomy, however, because follow-up would be difficult or not possible.



Use another effective family planning method for 3 months after the vasectomy procedure.

## How Can a Partner Help?

The client's partner is welcome to participate in counseling and learn about the method and what support she can give to her partner. A female partner can:

- Understand that vasectomy is permanent
- Discuss as a couple whether they will want more children
- If they will not want more children, support his decision to end his fertility
- Discuss the alternative of female sterilization
- Discuss how they are going to prevent pregnancy during the first 3 months after the procedure, while waiting for vasectomy to become effective: Either use condoms or another method during this time.
- Show understanding and support him through the procedure and recovery
- Use female condoms consistently or encourage him to use male condoms consistently in addition to vasectomy if either partner has an STI/HIV or may be at risk of an STI/HIV

### ***“Come Back Any Time”: Reasons to Return***

Assure every client that he is welcome to come back any time—for example, if he has problems or questions, or his partner thinks she might be pregnant. (A few vasectomies fail and the men's partners become pregnant.) Also if:

- He has bleeding, pain, pus, heat, swelling, or redness in the genital area that becomes worse or does not go away.

General health advice: Anyone who suddenly feels that something is seriously wrong with his health after a vasectomy procedure should immediately seek medical care from a nurse or doctor. After a surgical procedure any health problem must be assessed carefully and considered to be related to the procedure until it is medically demonstrated that it is not.

# Helping Users

## Managing Any Problems

### *Problems Reported as Complications*

- Problems affect men's satisfaction with vasectomy. They deserve the provider's attention. If the client reports complications of vasectomy, listen to his concerns, give advice and support, and, if appropriate, treat. Make sure he understands the advice and agrees.

#### **Bleeding or blood clots after the procedure**

- Reassure him that minor bleeding and small uninfected blood clots usually go away without treatment within a couple of weeks.
- Large blood clots may need to be surgically drained.
- Infected blood clots require antibiotics and hospitalization.

#### **Infection at the puncture or incision site (redness, heat, pain, pus)**

- Clean the infected area with soap and water or antiseptic.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if the infection has not cleared.

#### **Abscess (a pocket of pus under the skin caused by infection)**

- Clean the area with antiseptic.
- Cut open (incise) and drain the abscess.
- Treat the wound.
- Give oral antibiotics for 7 to 10 days.
- Ask the client to return after taking all antibiotics if he has heat, redness, pain, or drainage of the wound.

#### **Pain lasting for months**

- Suggest elevating the scrotum with snug underwear or pants or an athletic supporter.
- Suggest soaking in warm water.
- Suggest aspirin (325–650 mg), ibuprofen (200–400 mg), paracetamol (325–1000 mg), or other pain reliever.
- Provide antibiotics if infection is suspected.
- If pain persists and cannot be tolerated, refer for further care (see Question 2, next page).

# Questions and Answers About Vasectomy

## 1. Will vasectomy make a man lose his sexual ability? Will it make him weak or fat?

No. After vasectomy, a man will look and feel the same as before. He can have sex the same as before. His erections will be as hard and last as long as before, and ejaculations of semen will be the same. He can work as hard as before, and he will not gain weight because of the vasectomy.



## 2. Will there be any long-lasting pain from vasectomy?

Some men report having chronic pain or discomfort in the scrotum or testicles that can last from 1 to 5 years or more after a vasectomy. In the largest studies, involving several thousand men, less than 1% reported pain in the scrotum or testicles that had to be treated with surgery. In smaller studies, of about 200 men, as many as 6% reported severe pain in the scrotum or testicles more than 3 years after the vasectomy. In a similar group of men who did not have vasectomies, however, 2% reported similar pain. Few men with severe pain say that they regret having the vasectomy. The cause of the pain is unknown. It may result from pressure caused by the build-up of sperm that has leaked from an improperly sealed or tied vas deferens, or from nerve damage. Treatment includes elevating the scrotum and taking pain relievers. An anesthetic can be injected into the spermatic cord to numb the nerves to the testicles. Some providers report that surgery to remove the painful site or reversing the vasectomy relieves the pain. Severe, long-lasting pain following vasectomy is uncommon, but all men considering a vasectomy should be told about this risk.

## 3. Does a man need to use another contraceptive method after a vasectomy?

Yes, for the first 3 months. If his partner has been using a contraceptive method, she can continue to use it during this time. Not using another method in the first 3 months is the main cause of pregnancies among couples relying on vasectomy.

#### **4. Is it possible to check if a vasectomy is working?**

Yes. A provider can examine a semen sample under a microscope to see if it still contains sperm. If the provider sees no moving (motile) sperm, the vasectomy is working. A semen examination is recommended at any time after 3 months following the procedure, but it is not essential.

If there is less than one nonmotile sperm per 10 high-power fields (less than 100,000 sperm per milliliter) in the fresh sample, then the man can rely on his vasectomy and stop using a backup method for contraception. If his semen contains more moving sperm, the man should continue to use a backup method and return to the clinic monthly for semen analysis. If his semen continues to have moving sperm, he may need to have a repeat vasectomy.

#### **5. What if a man's partner gets pregnant?**

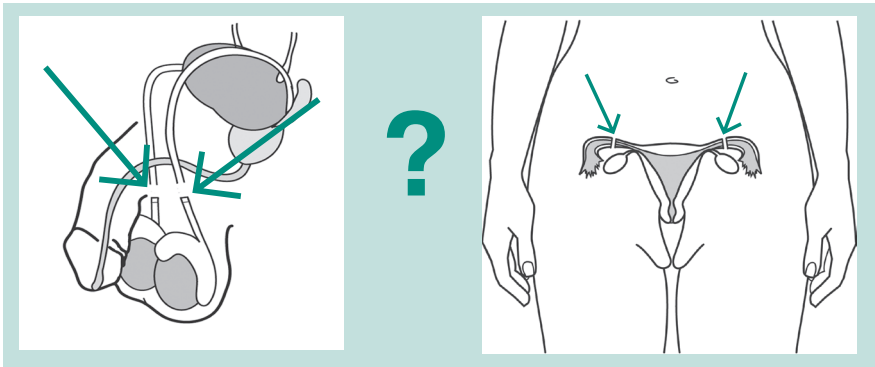
Every man having a vasectomy should know that vasectomies sometimes fail and his partner could become pregnant as a result. He should not make the assumption that his partner was unfaithful if she becomes pregnant. If a man's partner becomes pregnant during the first 3 months after his vasectomy, remind the man that for the first 3 months they needed to use another contraceptive method. If possible, offer a semen analysis and, if sperm are found, a repeat vasectomy.

#### **6. Will the vasectomy stop working after a time?**

Generally, no. Vasectomy is intended to be permanent. In rare cases, however, the tubes that carry sperm grow back together and the man will require a repeat vasectomy.

#### **7. Can a man have his vasectomy reversed if he decides that he wants another child?**

Generally, no. Vasectomy is intended to be permanent. People who may want more children should choose a different family planning method. Surgery to reverse vasectomy is possible for only some men, and reversal often does not lead to pregnancy. The procedure is difficult and expensive, and providers who are able to perform such surgery are hard to find. Thus, vasectomy should be considered irreversible.



### 8. Is it better for the man to have a vasectomy or for the woman to have female sterilization?

Each couple must decide for themselves which method is best for them. Both are very effective, safe, permanent methods for couples who know that they will not want more children. Ideally, a couple should consider both methods. If both are acceptable to the couple, vasectomy would be preferable because it is simpler, safer, easier, and less expensive than female sterilization.

### 9. How can health care providers help a man decide about vasectomy?

Provide clear, balanced information about vasectomy and other family planning methods, and help a man think through his decision fully. Thoroughly discuss his feelings about having children and ending his fertility. For example, a provider can help a man think how he would feel about possible life changes such as a change of partner or a child's death. Review The 7 Points of Informed Consent to be sure the man understands the vasectomy procedure (see p. 237).

### 10. Should vasectomy be offered only to men who have reached a certain age or have a certain number of children?

No. There is no justification for denying vasectomy to a man just because of his age, the number of his living children, or his marital status. Health care providers must not impose rigid rules about age, number of children, age of last child, or marital status. Each man must be allowed to decide for himself whether or not he will want more children and whether or not to have a vasectomy.

**11. Does vasectomy increase a man's risk of cancer or heart disease later in life?**

No. Evidence from large, well-designed studies shows that vasectomy does not increase risks of cancer of the testicles (testicular cancer) or cancer of the prostate (prostate cancer) or heart disease.

**12. Can a man who has a vasectomy transmit or become infected with sexually transmitted infections (STIs), including HIV?**

Yes. Vasectomies do not protect against STIs, including HIV. All men at risk of STIs, including HIV, whether or not they have had vasectomies, need to use condoms to protect themselves and their partners from infection.

**13. Where can vasectomies be performed?**

If no pre-existing medical conditions require special arrangements, vasectomy can be performed in almost any health facility, including health care centers, family planning clinics, and the treatment rooms of private doctors. Where other vasectomy services are not available, mobile teams can perform vasectomies and any follow-up examinations in basic health facilities and specially equipped vehicles, so long as basic medications, supplies, instruments, and equipment can be made available.