



Office of
Jeffrey G. Deppen, D.O., F.A.C.O.S.
Troy M. Ferguson, D.O., F.A.C.O.S.
Mark Jones, D.O., F.A.C.O.S.
Werner H. Henning, D.O.

VASECTOMY

Procedure Information

VASECTOMY

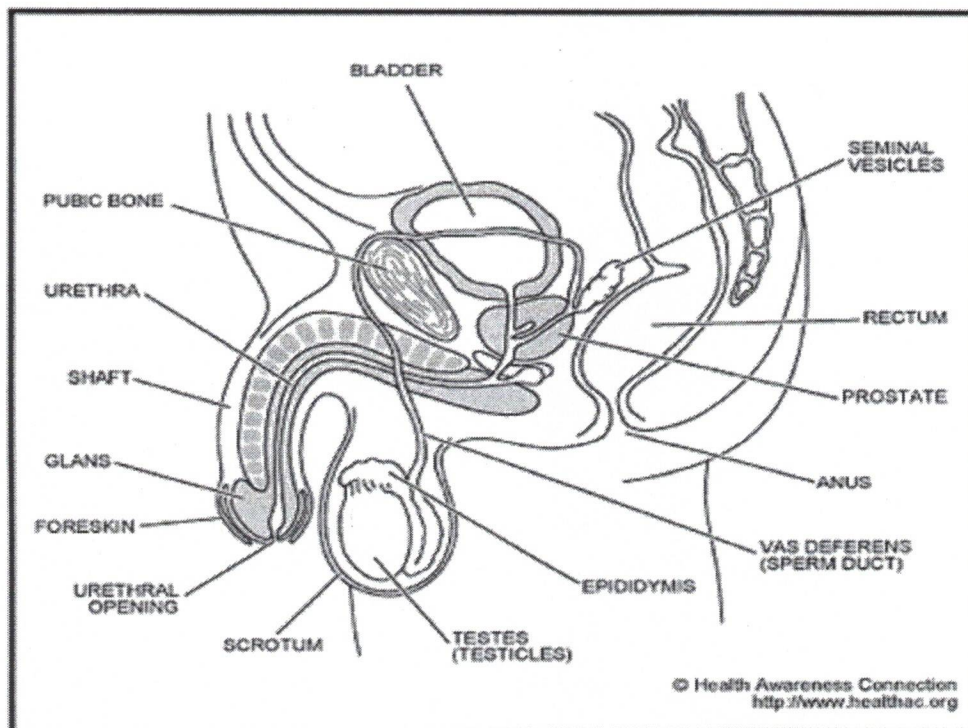
An ever increasing number of men and women are seeking protection from unwanted pregnancies. A variety of temporary or permanent birth control measures are available and the choice depends on one's own beliefs, values, and understanding of each method's advantages or disadvantages. Physical and emotional aspects of these methods have far-reaching consequences. Each couple must carefully consider the alternatives and inform themselves in assisting you in making this decision.

For men, the most common permanent sterilization method is vasectomy which is the surgical interruption of the sperm-carrying tubes or vas deferens. Sperm are effectively blocked from reaching the urethra. To be sterilized means being unable to father children. Approximately 500,000 men per year have a vasectomy in physician's offices, hospitals and out-patient clinics.

In addition to male sterilization, vasectomy is occasionally performed to prevent infections of the epididymis (cap of the testicle).

Despite the common occurrence of vasectomy, many questions, myths, and concerns still exist. This information sheet is designed to answer these questions, relieve concerns, and to provide factual information about a vasectomy. Benefits, consequences, and helpful instructions about this procedure are also included. It is intended as a supplement to physician education and counseling efforts.

A study of the vas deferens anatomy, function, and scrotum relationships is vital for a complete understanding of vasectomy. (See illustration) The vas deferens or "cord" as it is commonly called is a muscular tube with an inner canal. It is the size and shape of a pipe cleaner and is located in the back part of the scrotum. It starts at the lower end of the epididymis back of the testicle and passes through the scrotum and groin into the lower abdomen, then descends to the prostate where it terminates. It is joined by the duct from the seminal vesicle just before entering the prostate and together they are known as the ejaculatory duct. During the passage through the scrotum and groin, the vas deferens is surrounded by blood, and lymph vessels and nerves. Sperm are produced in the testicle, mature in the epididymis, and travel along the vas deferens until they reach the ejaculatory duct and seminal vesicles where they are stored until time of ejaculation. When the nutrients and fluid from the prostate and seminal vesicle join sperm, the mixture is known as semen. At that time of ejaculation, contractions of the seminal vesicle and prostate force the semen into the prostatic urethra and then to the outside via the penis.



There are five aspects of vasectomy that need further explanation:

1. The decision to have a vasectomy.
2. Preparation for vasectomy.
3. The procedure.
4. Postoperative consequences
5. Complications

DECISION FOR VASECTOMY

Men are assuming more responsibility in birth-control decisions and in choosing the method of sterilization. Despite an abundance of information on this subject, questions and concerns are common and normal because of conflicting information from a variety of sources. The most common questions are answered with the help of current scientific knowledge and the personal experience of men who have had a vasectomy.

Q: What advantages does a vasectomy have over other forms of birth control?

- A:**
1. The operation is permanent and future precautions are not needed.
 2. It is safe and surgically simple with a minimal complications and side effects
 3. Future health hazards have not been proven.
 4. It is economical when compared to many years' cost of other contraceptives.
 5. Short surgery and recovery time with minimal discomfort.
 6. Fewer risks than other contraceptive measures.
 7. The procedure is done as an out-patient procedure, eliminating a hospital stay.

Q: Is my manhood affected by vasectomy?

A: There is no change in sexual performance. The ability to have an erection and satisfactory intercourse with orgasm and ejaculation is maintained. Since sperm occupies only a small portion of semen, the volume of ejaculation is almost the same. Male hormones do not flow through the vas deferens. They continue to be produced by the testes and enter circulation through blood vessels which are not interrupted by vasectomy. Some couples say their sex life is improved because the fear of producing pregnancy is gone.

Q: After vasectomy, what happens to sperm produced by the testicles?

A: Since sperm cannot pass the blocked vas deferens, the cells disintegrate and are absorbed by the body just as other cells in the body are broken down and replaced.

Q: If I change my mind, can I have the tubes spliced back together again?

A: Yes. An operation, vasovasotomy, is available for this purpose. The scarring at the ends of the vas is removed and with the help of microscopic magnifying lens the ends are rejoined with fine suture material. While the results are encouraging and constantly improving, vasectomy should be considered a permanent procedure until the vasovasotomy rate of success approximates 100%. The time delay between vasectomy and vasovasotomy is also a factor in success or failure.

Q: I have heard a lot about health hazards as a result of vasectomy. Am I to be concerned?

A: The latest study reported in 1983 of 20,000 men with and without vasectomy and who have been followed at least seven years indicates that there are no major medical problems as a result of the operation. In fact, they were healthier than men who have not had vasectomy. Earlier reports of hardening of the arteries developing in monkeys post-vasectomy have not been sustained in humans to date.



PREPARATION FOR VASECTOMY

Medical Precautions

Certain medical conditions influence the success of the vasectomy. Should any of the following apply to you, notify your physician in advance of the vasectomy.

- ✓ History of excessive bleeding or blood disorders.
- ✓ Allergy or sensitivity to local anesthetics, such as the "caine" drugs or antibiotics.
- ✓ Skin disease involving the scrotum, especially infected pimples.
- ✓ Regular usage of aspirin or aspirin-containing medicines for a week before vasectomy.
- ✓ History of injury or prior surgery on the male genital organs.
- ✓ History of recent or repeat urinary tract or male genitalia infections.
- ✓

Athletic Supporter

Bring a suitable size athletic supporter or suspensory with you. If none are available, wear jockey type undershorts or briefs.

Meal - A light snack or liquids is preferable to any heavy food before vasectomy.

Travel - Arrange to have someone drive you home.

VASECTOMY OPERATION

Come to the physician's office in a relaxed frame of mind. Being "uptight" can cause the scrotum muscles to draw the testicle close to the abdomen and make it difficult to grasp the vas deferens. You should have shaved or cleansed the scrotum prior to your visit, or your physician will do this at the time of vasectomy.

After reclining on the surgery table, an antiseptic solution is used to paint the scrotum and reduce skin bacteria. The incision area is isolated by sterile towels. The upper or mid-scrotum is chosen for the operation because of the closeness of the vas deferens to the scrotal skin in this area. A local anesthetic is injected with a fine needle and a slight stinging sensation may be experienced. Rarely, general anesthesia may be necessary. After freezing the skin, a small incision is made; the vas is identified and separated from the surrounding tissue. The vas is then pulled up into the incision. Despite the additional use of local anesthesia in the deeper tissues, you may experience a tug or pulling sensation in the scrotum or groin when the vas is being worked on. The vas deferens is divided and the ends are sealed in a variety of ways. Some physicians occlude the ends of the vas by suture ties while others will use a small metal clip for the same purpose. Many physicians will remove a segment of the vas prior to occluding the ends in order to identify that it is truly the vas deferens that is being divided. Also, this will lessen the chance of the vas rejoining. Other physicians will double the vas ends upon itself before tying it. Rather than tie the ends, some physicians will insert an electrocautery needle in the central vas canal and cauterize the ends to prevent future rejoining. Small bleeding vessels are either tied or cauterized. The divided vas is then replaced in the scrotum and the skin edges are allowed to either touch and heal by themselves, or the edges are closed with suture material that will dissolve in a week or so.

A small dressing is applied to the incision to absorb oozing and to protect the clothes from tissue seepage. A suitable size athletic supporter is used to immobilize the scrotum and minimize discomfort. Someone will have to drive you home, as you may be light-headed or have a woozy feeling. The total time of vasectomy varies from 15 to 45 minutes, depending upon the circumstances.

POST-VASECTOMY MANAGEMENT

Dressing

Dressings should be changed when stained or soiled. Small sterile gauze squares are available at any drug store. They can be removed when the dressing is dry or there is no stain which usually occurs within a day or so.

Athletic Supporter

The supporter keeps the scrotum from moving in order to reduce discomfort. It can be worn as long as comfortable.

Bathing

Bathing or showering can start the day after vasectomy. It is better to avoid rubbing with a towel and use a pat-like motion to dry the scrotum.

Healing

The small incisions will heal with a minimal scar and will become almost invisible, especially to others.

Skin Separation

Sometimes the skin will separate due to tissue, fluid, oozing blood, or premature release of the skin sutures. The edges can be pinched together with sterile gauze and your fingers. This will approximate the skin and allow it to heal.

Bruising

Black and blue discoloration is common because of bleeding of the small vessels within skin. There is usually no discomfort and the color will fade within a week.

Pain

After the local anesthesia wears off in a couple of hours, there may be mild discomfort which varies according to each person. This may be treated with simple pain medicine every four hours. Shaved ice in a plastic bag can be placed over the supporter and dressing and can provide relief for several hours at a time.

Skin Suture

If suture material has been used, this will dissolve within a couple of weeks and need not be removed. Where no sutures are used, the skin edges will stick together and heal.

Physical Activity

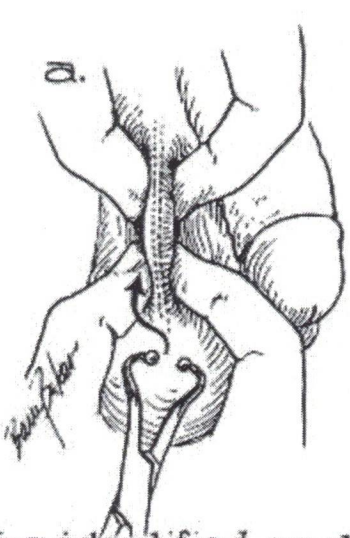
Rest on the day of vasectomy is recommended. Usual daily activities can be resumed the day after vasectomy unless vigorous physical activity or exercise is involved. Then the general guide is to avoid these activities for four or five days.

Swelling

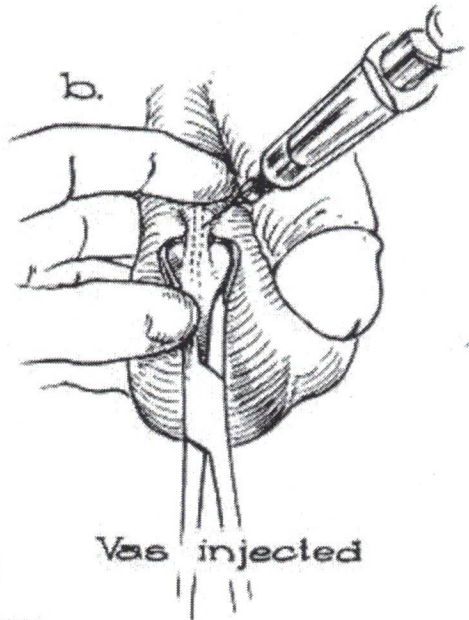
It is ordinary to experience some degree of swelling of the incision after vasectomy. Usually this swelling subsides within a few days.

Sexual Actives

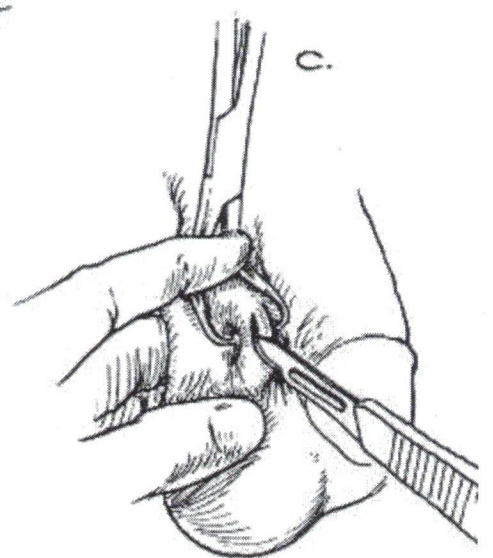
Sexual actives can begin in a few days when scrotal swelling and tenderness starts to subside. The first few ejaculations can cause a dull ache in the testicles but this will gradually disappear. Living sperm still reside in the vas, seminal vesicle and ejaculatory duct. Until this storehouse of sperm is eliminated by repeat ejaculations, contraceptive precautions are **ABSOLUTELY NECESSARY**. Semen samples are regularly checked for disappearance of sperm over several weeks post-vasectomy. In general 13 to 15 ejaculations and two consecutive sperm counts a few weeks apart without presence of dead or live sperm are necessary for sterility. Your own physician may have different criteria for sterility, so follow his schedule.



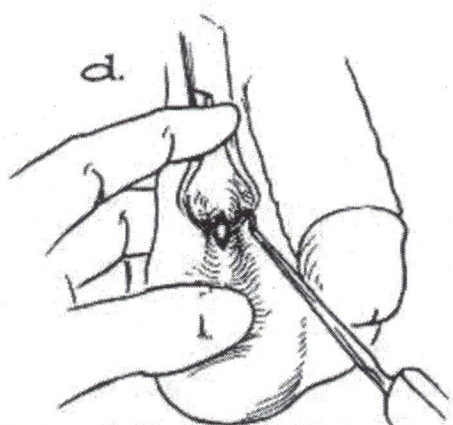
Vas identified and clamped with modified towel clamp (Leader) (optional-injection under vas prior to clamp application)



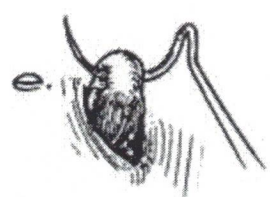
Vas injected



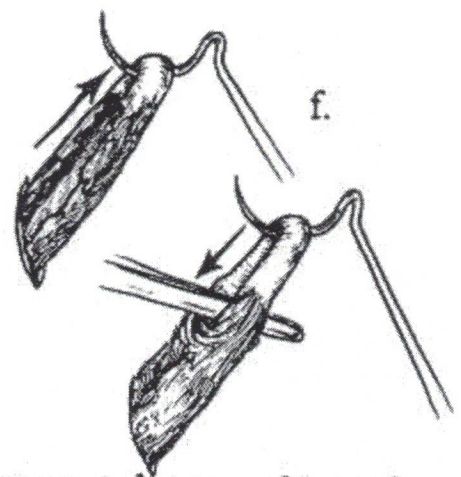
Small incision made over vas



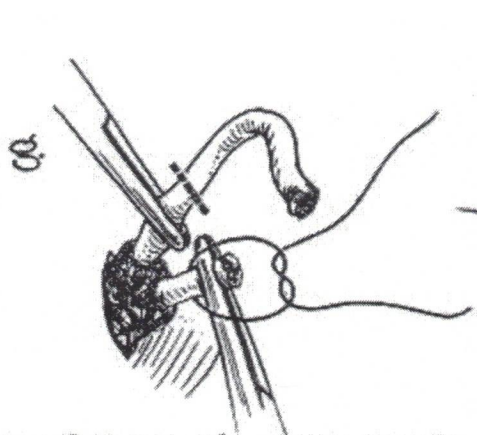
Vas delivered into incision with Leader vas hook



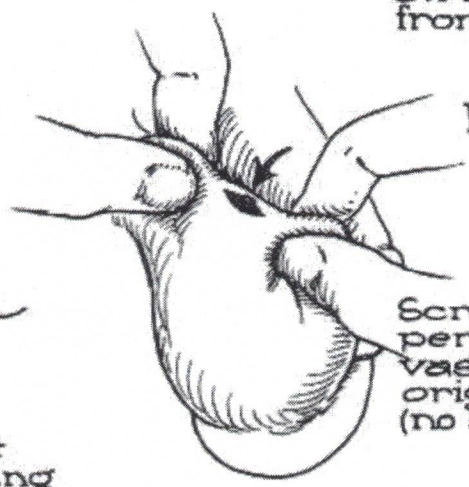
Needle positioned to isolate vas from surrounding fascial investment



Fascial investment stripped downwards from vas



Vas clamped, segment removed, and remaining ends tied



Scrotum elevated to permit tied ends of vas to retract into original position (no skin suture is used)

COMPLICATIONS

No operation can be guaranteed perfect and free from complications regardless of the skill and careful technique of the operating physician. Vasectomy is no exception, but fortunately these complications are few in number and relatively minor. You need to be aware of these problems, the consequences and methods of resolving these problems:

✓ **Bleeding, superficial and deep**

Superficial-Bleeding from the skin edges or just beneath the skin is common and usually stops within several hours. If the skin edges continue to ooze, pinching the bleeding tissue with gauze or applying pressure on the area will usually halt the bleeding.

Deep-The loose elastic tissue of the scrotum allows bleeding to expand rapidly. Most of the time the bleeding stops and only thickened tissue or a knot remains. This gradually softens and disappears. Bleeding that does not stop may expand and require a re-opening of the scrotal incision and tying off the bleeder. Fortunately, this is an uncommon occurrence.

✓ **Inflammation**

Tissue or incision tenderness, redness, and swelling can be related to the reaction caused by the surgery or infection organisms. Despite bathing and pre-vasectomy use of antiseptic solution, some germs may remain. In addition, germs can be freed at the time when the vas is divided. The site of inflammation can include deeper scrotal tissue, vas deferens, testis, and epididymis. The degree of inflammation ranges from mild redness, swelling and soreness to discharge draining from the incision or from development of an abscess. Treatment varies from observation without treatment to exploration and drainage. Warm soaks, anti-inflammation medicine, and antibiotics may be useful. Fortunately, the percentage of the more serious infections causing fever and chills are rare.

✓ **Sperm Granuloma**

Sperm leakage from the vas deferens during division or post-vasectomy can result in a tissue reaction called sperm granuloma. It is felt as a knot-like thickening of fibrous tissue at the end of the vas deferens. Most of the time the knot is small in size and of little consequence, but some men complain of knot sensitivity, ache in the scrotum or groin discomfort. If both ends of the vas deferens are joined by a sperm granuloma then there is a chance that living sperm can appear in the semen, resulting in fertility.

Your physician should be consulted if a sperm granuloma results or develops, causes symptoms, or increases in size. Treatment is removal of the sperm granuloma and a repeat vasectomy.

✓ **Vasectomy Failure, Primary and Secondary**

Primary-If dead or live sperm continues to appear in the semen sample after one is normally expected to be sterile, then a cause might be the presence of another vas deferens, which is very rare. Other reasons may include the dividing of a vessel or structure other than the vas deferens or an incomplete division of the vas deferens which allows it to rejoin. It will be necessary to repeat the vasectomy if this problem continues. Fortunately, this difficulty occurs in a very small percentage of men.

Secondary-When the semen examination after vasectomy indicates a sterile specimen (absence of live or dead sperm) and sperm are discovered at a later date, the likely cause is a gradual rejoining of the vas deferens segments. This is a rare occurrence regardless of surgery techniques. Tissue that is interposed between the vas deferens ends at the time of vasectomy is less likely to cause rejoining. Treatment for rejoining vas deferens is a repeat vasectomy.

While a small percentage of complications are unavoidable with any procedure, the key to vasectomy success is your awareness of possible problems, followed by recognition and correction. You and your physician can work together for your mutual satisfaction.

If there is any doubt or question about this procedure, always consult your physician.