

Reversing Your Vasectomy

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When you had your vasectomy, you were certain your

When you had your vasectomy, you were certain your family size was just right for you. You thought carefully about that decision because your doctor told you it could not be reversed. But life often changes, and now you would love to have more children.

Fortunately, there is hope for you!

Through the **advanced techniques of microsurgical vasectomy reversal**, many couples who once thought they could never have children again have been blessed with new families.

Many surgeons perform vasectomy reversal, but most do so with non-microsurgical techniques — an approach which all too frequently leads to scarring, failure, and disappointment. Even those surgeons who do use true microsurgical technique generally perform only a few of these procedures a year, or have had only a few years of experience, and hence will have much less likelihood of achieving success.

Therefore, when considering a vasectomy reversal, you will be prudent to choose a surgeon with **extensive experience in true microsurgical techniques**, who can provide you with the best hope for a successful, happy outcome.

Dr. Finnerty is one of the most experienced microsurgical vasectomy reversal surgeons in the country. Located in the beautiful Pacific Northwest, he has performed successful reversal surgery on patients from across the country and overseas.



We hope you will review the enclosed information and consider Dr. Finnerty for your reversal surgery. Also, check out our website at **micro-reversals.com** for additional information. Please feel free to contact us for additional information or questions — we would love to talk with you!

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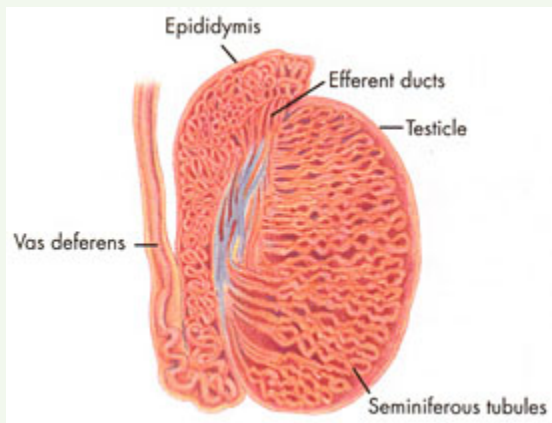
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About Vasectomy

Vasectomy is a minor surgical procedure for permanent male fertility control, performed on about 700,000 men each year in the United States. The duct which carries sperm from the testicle (called the *vas deferens*) is cut and sealed to prevent sperm from leaving the testes. The vas deferens measures about 1/10th of an inch in diameter (2.5 mm), the majority of which is a thick muscular wall. The actual passageway for the sperm (called the **lumen**) measures less than 1/100th of an inch (0.25 mm).

The testes continues to produce sperm after a vasectomy — this is what makes vasectomy reversal possible. The challenge is to accurately reconstruct the duct system, which is extremely small and delicate. While the vas is very easy to cut, it is much more difficult to successfully reconnect. After vasectomy, there is continued production of a small amount of sperm fluid from the testes. This results in a slight increase in pressure in the vas below the site of the vasectomy, which over time will stretch the inside of the vas duct. As a result, the inside diameter of the vas below the vasectomy site is often **3-5 times larger** than the original diameter above the vasectomy.



As the vas deferens gets closer to the testes (below the vasectomy site), its thick muscular wall thins out and disappears, and it merges into a structure called the **epididymis**. This portion of the duct is attached to the testes, and it contains nearly 20 feet of a delicate, coiled microscopic tubule. Back pressure from ongoing sperm production and the blockage caused by vasectomy may cause this delicate tubule to become extremely thin and rupture over time (this is sometimes referred to as a "**blowout**").

When this occurs, the resulting inflammation will cause **scarring and secondary blockage**, (which may be partial or complete) between the testes and the vasectomy site. Even precise repair of the vasectomy site, without addressing this epididymal obstruction, will result in failure to restore fertility.

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The problem of epididymal obstruction becomes **more likely** as the time after vasectomy increases -- although it is quite common even in men only a few years out. While most men have few problems after vasectomy, a small percentage may also experience **post-vasectomy pain**, either intermittently with sexual activity, or in some instances, on a chronic basis. When this occurs, it can be a difficult and frustrating problem to overcome, as medical therapy rarely if ever helps. Surgery to reverse the vasectomy is almost always the **best solution** to this challenging complication of vasectomy.

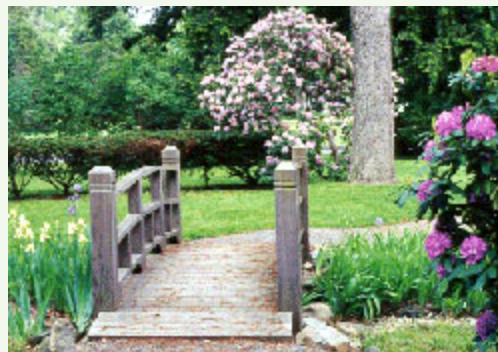
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Can Vasectomy Be Reversed?

In the past results were very poor for vasectomy reversal, because of the small size of the vas deferens and the tiny opening (lumen) inside it. Older reversal techniques, generally using low-power optical magnification or jeweler's loops, simply removed the scarring from the vasectomy site and placed a few large sutures to approximate the ends. Because the upper and lower ends of the vas have such different diameters after vasectomy, the inside channel was poorly aligned. This allowed sperm to leak out, resulting in inflammation and scarring.



Success as a result was relatively rare, and even when sperm appeared after surgery, sperm counts were often quite low and fertility was poor. Attempts to improve the success rates using techniques such as stents failed to improve the results. And when a secondary obstruction from an epididymal leak occurred, these non-microsurgical techniques offered no hope for success.

The answer to these problems arrived in the mid-1970's with the development of very high magnification surgical techniques, called **microsurgery**. Initially used to repair tiny blood vessels and nerves, it quickly found application in infertility surgery. Using specialized equipment called an *operating microscope*, surgeons with microsurgical training use sutures (stitches) which are barely visible to the naked eye, working with magnification between 20-50x (compared to 2-4x with optical loops).



These microsurgical techniques allow extremely precise placement of sutures, resulting in a far more accurate alignment of the vas lumen and markedly improved success rates in vasectomy reversal surgery. Using microsurgery, eight or more sutures can be placed around the inside channel of the vas, which is the size of the “o” in “God” on a penny.

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About Microsurgery



Microsurgery is a subspecialty of surgery involved in reconstruction of small anatomic structures. It was developed initially in the 1960's to facilitate the repair of tiny blood vessels, using an **operating microscope** and surgical techniques already in use for ear surgery. It soon found wide application, especially in hand surgery and reconstructive plastic surgery. In the 1970's, urological surgeons and infertility specialists began to apply microsurgical techniques to the management of sterilization reversal, especially fallopian tube reconstruction in women and vasectomy reversal in men.

Before microsurgery, vasectomy reversal had been attempted for many years, with almost universally poor results. Many variations of non-microsurgical techniques were developed to improve the success rates to no avail. Little progress was made until the introduction of true microsurgical technique. Epididymal reconstruction prior to the use of microsurgery always failed and was rarely if ever attempted. This led to the general presumption that vasectomy could not be reversed with any reliability and should not even be undertaken after 10 years post vasectomy.

Since the advent of microsurgical techniques, such generalizations are no longer true.

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The Operating Microscope



The first critical element in microsurgery is the **operating microscope**. These come in a wide variety of manufacturers and capabilities depending on their specific surgical use. They all share common features, however. There is a heavy movable stand and pedestal for stability, with an attached articulating arm which allows the optical portion to swing over the surgical area. The optical head generally has one or two pairs of binocular eyepieces, and a high intensity light source, allowing the surgeon (and an assistant, if one is needed) to see the

operating area in high magnification (generally 15-40x) while having the hands free. The more sophisticated microscopes have foot pedal power control over zoom, focus, light, and position.

Microsurgical Instruments

Specialized instruments have been developed to allow surgeons to work under high magnification with exceedingly small sutures. These instruments are machined to exacting tolerances and must be treated with utmost care. Many microsurgical specialists purchase and maintain their own micro instruments to ensure that they remain in perfect condition.



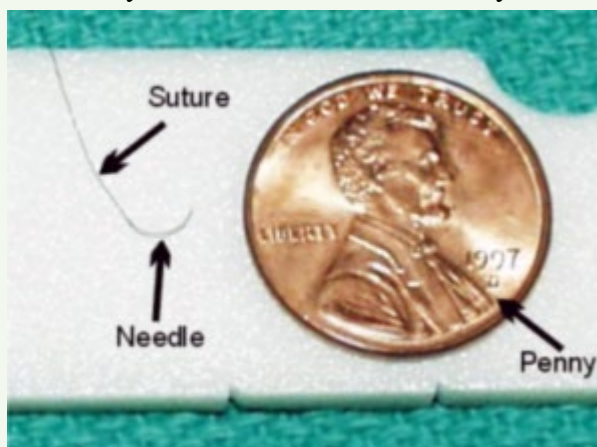
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Microsurgical Suture

The sutures (stitches) used in microsurgery are extraordinarily fine. They are made from a monofilament nylon and cannot be seen by the unaided eye unless they are against a white background. Each suture is manufactured by hand. To get some idea of the size of the structures repaired, look at a penny. The “o” in “God” is approximately the diameter of the inner layer of the vas deferens (0.2-0.3 mm); the epididymal tubule is about *half* this size — and far more delicate. Between 6 and 8 sutures are typically placed around the inner, mucosal layer of the vas, and a second outer layer (for mechanical strength) generally requires 8-12 sutures. Epididymal repair (VE) will use between 2 and 6 sutures on the tubule, depending on size and the specific technique used.



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Success Rates for Vasectomy Reversals

Success rates for vasectomy reversal are generally reported in two ways: *technical success* and *pregnancy rates*. When evaluating success rates, you should keep in mind that they are statistical averages derived from large numbers of patients. Your specific situation and results may differ from that of a group because of many personal variables, such as your age, your fertility prior to vasectomy, your partner's fertility, the technique of vasectomy, and a host of other factors. Their principal value is to guide you to a general idea of your chances for success.



There have been many medical studies evaluating the success rates of vasectomy reversal, and these studies are often quoted by reversal surgeons when you ask about your chances for successful reversal. Unfortunately, these studies provide little or no help in assessing your chances for success with a **specific** surgeon. A surgeon with limited experience in microsurgery will not achieve the quoted success rates from large studies performed by experienced surgeons — and such inexperienced surgeons almost never have the skills to successfully and reliably perform epididymal reconstruction. Whenever possible, you should try to determine the experience and personal success rates of the specific surgeon to whom you are entrusting your reversal.

- **Technical Success Rates**

The term, **technical success**, refers to ability to **restore the vas deferens and epididymis to their normal, open state**, as they were before your vasectomy, allowing the passage of sperm from the testes. This is determined by the appearance and number of sperm found in a sperm count (**semen analysis**) after surgery. Historically, the best technical success rates have been obtained when there is no obstruction in the epididymis, allowing a **vas-to-vas (VV)** repair on both sides at the site of the original vasectomy.

As time passes after a vasectomy, the likelihood of **obstruction in the epididymis** increases—especially after 7-10 years. However, some men, even 15 or 20 years after vasectomy, do not develop such obstruction, and may therefore expect the better technical success rates a vas-to-vas repair affords. The increasing incidence of secondary epididymal obstruction with time is the most important reason that technical success rates tend to decline as the time after vasectomy increases. With increasing time after vasectomy, the increased pressure from the vasectomy may result in rupture and internal leakage of sperm in the epididymis, with resulting inflammation,

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scarring and blockage. This may occur on either side, or both. The blockage is microscopic, causes no symptoms as a rule, and cannot be detected on a physical examination before surgery. It can only be detected at the time of surgery. When epididymal blockage occurs, repair of the vasectomy site alone will fail—the vas must be connected to the epididymis directly, above the site of obstruction.

This procedure — called an epididymal repair or **vasoepididymostomy (VE)** — is one of the most technically demanding procedures in surgery, because of the exceedingly small and delicate nature of the epididymal tubule. It is a procedure which can only be performed successfully by a microsurgeon with extensive experience in such reconstructive surgery. Even in the hands of experienced microsurgeons, epididymal repair has a lower technical success rate than vas-to-vas repairs. This is due both to the extremely small size and fragile nature of the epididymal tubule, and because the obstruction sometimes occurs very close to the junction of the epididymis and testes, where it is very difficult to repair.

- **Pregnancy Rates**

The goal for most patients undergoing reversal surgery is achieving pregnancy. Technical success—successfully reconstructing the duct system—is a prerequisite, of course. But not all men who undergo successful reversal surgery will be able to get their wives or partners pregnant. The problem is reduced sperm quality caused by functional changes in the epididymis from the original vasectomy. Sperm normally spend about 6-8 weeks in the epididymis after they leave the testes, where they develop their fertility capability: the ability to swim—called *motility*—and the ability to penetrate and fertilize the egg (called *capacitation*). When a vasectomy is performed, the testes continue to manufacture sperm. These are released into the epididymis, where they will eventually break down and be reabsorbed. However, the increased pressure following vasectomy causes changes in the epididymal duct which affects the development of motility and capacitation. In general, the longer the time after vasectomy, the more pronounced these changes become. When a successful reversal is performed, sperm will be found in the seminal fluid in many cases within a relatively short period of time. Sperm counts can rise in some instances to normal levels within months — although in some cases it can take quite a bit longer. However, in most men, the percentage of motile sperm remains very low at first and may take a much longer time to recover. In some men, motility and capacitation remain reduced long-term, preventing successful pregnancy. As a result, pregnancy rates after reversal are lower than expected given the technical success rates and tend to decline as the time after vasectomy increases. Keep in mind that there is **does not appear to be any evidence for increased genetic abnormalities in sperm following vasectomy reversal** — the incidence of miscarriage and birth defects following reversal are no different than that of the general population.

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Why Do Vasectomy Reversals Fail?



A **vasectomy reversal which fails** is an extremely disappointing — not to mention expensive — experience. Patients are of course anxious to know why the surgery did not work — and what to do to prevent such failures, either on their first reversal, or especially when considering a redo after failed reversal.

Microsurgical vasectomy reversal is *one of the most challenging operations in all of surgery*, because of the extremely small size and delicacy of the structures being reconstructed. This is **particularly true when the epididymis needs**

repair, where the wall of the epididymal tubule is only about 1/2 the diameter of a human hair.

Every surgeon who performs vasectomy reversal **has some failures** — if you find a surgeon who “guarantees” success, it is best to look elsewhere, as he or she is not being honest. Highly experienced reversal surgeons will, as expected, have the lowest failure rates — but it is important to determine the nature of even a good surgeon’s skills — **in particular, their experience and success with epididymal reconstruction (VE)**, which is **far more challenging** than uncomplicated vas-to-vas (VV) repairs.

Most well-trained and reasonably experienced reversal surgeons should achieve 90% or better success rates (that is, postoperative sperm counts in the normal range) **in uncomplicated vas (VV) repairs**. With current techniques, the **success rate of epididymal reconstructions should approach 60%** — but success rates like these require a great deal of experience with this very difficult repair. Less experienced microsurgical surgeons are generally more likely to achieve only 30% success, or less, on such repairs.

Some surgeons unfortunately blame the patient when the reversal fails, telling them that they formed “scar tissue” which blocked the reconnection. While this is occasionally true, it is much more likely that **surgical technique, or failure to perform the correct surgery**, are the cause of most reversal failures. Some surgeons promote the use of anti-inflammatory medications and even **steroids** (such as **prednisone**) after surgery, to prevent such “scarring” — despite the fact that there is **no medical evidence for their benefit** in reducing the failure rate of reversal surgery, and **drugs such as prednisone impair healing and increase the risk of infection**, among other complications.

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So why do reversal surgeries fail? In Dr. Finnerty's experience of nearly 40 years of performing microsurgical reversal, they fail for one of the following reasons:

- **A technically poor repair:** All non-microsurgical, and many microsurgical, vas-to-vas repairs, fail because there is **poor alignment of the vas**, which results in leakage of sperm fluid, inflammation, and scarring. While technical failures can occur even with a very experienced microsurgeon, they are **far more likely in less experienced surgeons**. Repairs done with non-microsurgical techniques (2-3x loops, using large sutures) cannot be performed with sufficient accuracy to prevent this problem. Epididymal repairs, because of the extremely small size and delicacy of the epididymal tubule, often result in technical failure by less experienced surgeons not comfortable with this demanding procedure.
- **Inadequate blood supply to the vas:** Many vasectomy techniques use **cautery** (using an electric current to coagulate the ends of the cut vas by heat). While small amounts of cautery pose no problem, **extensive cauterization damages the blood supply to a long length of the vas**. This **damaged tissue** may be very subtle and difficult to detect at surgery and **must be removed** if proper healing is to occur. This type of failure often results in some sperm being present early after surgery, with failure 3-12 months later.
- **Failure to recognize and repair epididymal obstruction:** This is very common in less experienced microsurgeons who are not comfortable with this very difficult procedure. Many surgeons skilled at repairing the vas with microsurgery are much less comfortable performing epididymal repairs for this reason, and often therefore perform vas-to-vas (VV) repairs when epididymal repair (VE) is a much better option. Note that the presence of a few sperm or sperm parts in the fluid found at surgery *does not guarantee* that there is no obstruction in the epididymis — a fact which many reversal surgeons do not consider.
- **Extremely proximal epididymal obstruction:** In some instances, obstruction after vasectomy occurs in or near the **efferent ducts**, which are delicate tubes which join the testes to the epididymis. In such cases, even expert epididymal repair may fail. Connecting the vas to the efferent ducts can be performed by an experienced surgeon. This repair is extremely challenging from a technical standpoint, and the tubule at this level is far smaller (0.1mm or less) than those in the lower portions of the epididymis, and therefore these repairs have a substantially higher failure rate than reconstruction lower in the epididymis.
- **Other infertility problems:** In some cases, failure is caused by **other fertility issues**, such as poor testicular function. Another common potential issue is the use of **testosterone replacement therapy**, which effectively shuts down sperm production.

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Determining the Type of Vasectomy Reversal

For many reversal surgeons, there is no choice in the type of reversal surgery performed. Those trained only in non-microsurgical techniques, or with little experience in microsurgical techniques, especially epididymal repair, can only perform a vas-to-vas repair (VV). If you are fortunate enough to have no epididymal obstruction, and the surgeon has adequate training in microsurgery, you may have a reasonable chance for a successful outcome.



However, experience has shown that **a significant percentage of men will develop epididymal obstruction after vasectomy** — even those who are a relatively short time after vasectomy.

In the past, success rates for epididymal repairs were poor, even with microsurgery, and every effort was made to avoid this procedure where possible. With current success rates, many of these previously unrecognized epididymal blockages can be addressed successfully. Furthermore, successful epididymal repair is often associated with significantly improved sperm quality and fertility.

There is no reliable way to determine the presence of epididymal obstruction before surgery. Statistics such as time post vasectomy may indicate a higher chance of its occurrence, but on an individual basis, this can only be determined at surgery.

Determining the Need for Epididymal Repair



At the time of reversal surgery, the vasectomy site is removed, which allows fluid to be expressed from the testicular end of the vas. In the past, the presence of any sperm or sperm parts was thought to indicate that no obstruction was present. Even men with no sperm — if the fluid appearance was clear — were considered unobstructed.

Experience has shown that the incidence of obstruction is very high in men who have no sperm (regardless of fluid appearance), sperm parts only, or inactive (non-motile) sperm with fluid which appears thick or creamy, and many of these will be better served with epididymal reconstruction.

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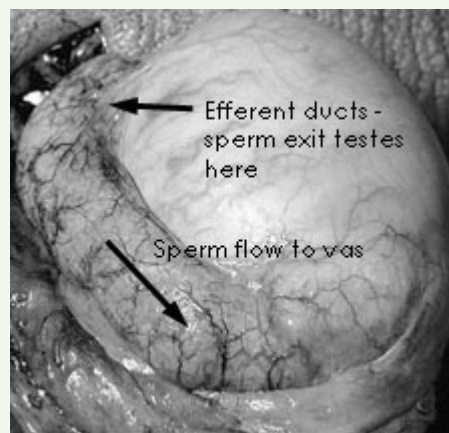
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About Vasoepididymostomy

The first portion of the sperm duct is known as the **epididymis**. The epididymis is about 1.5 inches long, is attached to the testes, and contains about 15-20 feet of coiled, microscopic sperm ducts. Sperm become mature and active (acquiring motility) in the epididymis after they leave the testes.

After vasectomy, as a result of back pressure, some men will develop a leak of sperm fluid from one of these delicate tubes, which results in inflammation and scar tissue formation, resulting in a second obstruction point in the epididymis. **The chances of this occurring increase with the number of years after vasectomy, but can occur at any time after vasectomy.**

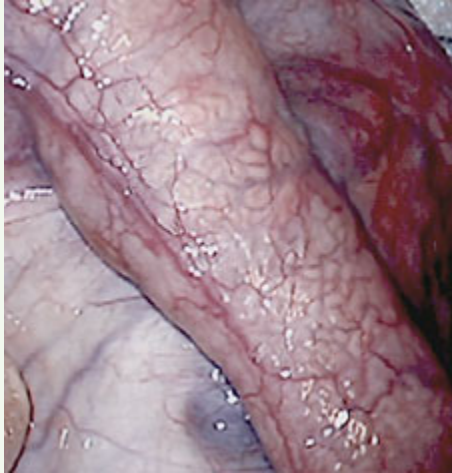


If this blockage is not repaired at the time of vasectomy reversal, the sperm duct will remain obstructed and the reversal will fail. The tubule in the epididymis is even smaller than the inside channel of the vas (about **0.1 to 0.2 mm in diameter**), and it has an extremely thin wall. Repair of a blockage of the epididymis is impossible without microsurgery. Microsurgical vasoepididymostomy (VE) is the **most technically demanding procedure performed in surgery**, in any specialty, and considerable surgical experience is required to get reliable results. **The need for a vasoepididymostomy can only be determined at the time of surgery**, by evaluating the fluid from the testes for its appearance and the presence or absence of sperm. Blockage of the epididymis may be seen on one or both sides.

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Direct inspection of the epididymis is necessary in all such situations. The point of blockage can generally be detected by the appearance of the epididymal tubules (which can be seen through the thin, translucent outer layer of the epididymis), whether the tubules are distended above a point and decompressed below, and by testing the epididymal fluid directly for the presence of active sperm.

Sperm flows from the testes, into the efferent ducts, and down the epididymis toward the vas. Above the blockage, the epididymal tubules will be distended, and often have a creamy fluid seen through the wall of the tubule. Below the obstruction, the tubules are decompressed and often more translucent. These transition zones help identify points of obstruction (of which there may be more than one), but specific testing for sperm in the epididymal fluid (by opening the tubule, and examining the fluid under a lab microscope) must be performed to ensure the obstruction is bypassed.

Can a Failed Reversal Be Redone?

A failed vasectomy reversal is a great disappointment, and very discouraging. The good news is that the majority of failed reversals can be successfully redone. The success rates and difficulty of these repairs can vary widely. Many failures result from older non-microsurgical techniques, and these can be redone with success rates approaching first-time repairs. Others can be more challenging, including prior epididymal repairs or patients who have had several prior failed surgeries.

Dr. Finnerty has an extensive experience with complex and prior failed vasectomy reversals, one of the largest in the country.

We do request operative reports in such cases to carefully review the findings and techniques of the previous surgery or surgeries.

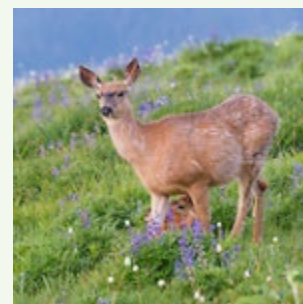
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Preparing for Your Surgery

For the safest and most comfortable experience with your surgery, certain preparations are important. The following information is provided to help you prepare for your vasectomy reversal surgery.



Please read and follow this advice carefully and be sure to contact us if you have any questions.

- You should **avoid taking any aspirin or aspirin-containing products** for two weeks before your surgery. Products containing **anti-inflammatory medication**, such as ibuprofen (Motrin, Advil), Naprosyn, or similar drugs should be avoided for **one week** prior to surgery. These medications prevent normal blood clotting and increase the risk of bleeding during and after surgery. (Even a *single* aspirin tablet will affect blood clotting for over one week!) **Tylenol** (acetaminophen) is safe to take at any time. If you are required to take aspirin or other similar medications for medical reasons, please contact us prior to surgery to discuss them.
- Some **supplements** may also **increase the risk of bleeding**. Known or suspected supplements include:
 - Gingko biloba
 - Garlic
 - Ginseng
 - Fish oil
 - Dong quai
 - Feverfew
- **If you are on blood thinners (such as warfarin, Lovenox, Plavix, etc.) it is critical that you contact us prior to surgery**, as these can greatly increase the risk of bleeding after surgery.
- You should **shower or bathe** the evening before surgery.
- You will need to **shave the scrotal area** (see below) the night before or morning of surgery. The area to be shaved includes the front and sides of the scrotal sac, the penis, and the area over both groins on either side of the penis. It is not necessary to shave the pubic area (the area above the penis). Shaving should be done within 24 hours of the surgery. (**Note:** the pre-screening call from the operating room may tell you **not** to shave. You should politely ignore this recommendation, which does not apply to this type of surgery).
- You must have a **completely empty stomach** for at least **12 hours** before the scheduled time of your surgery. This means **absolutely no food or fluids**, even water. This is

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required for your safety by the anesthesiologists—there can be **no** exceptions to this requirement; surgery **will be canceled** and rescheduled if it is not kept. If you are required to take prescription medications daily, you may be instructed to take these medications with a sip of water. Please contact us for further instructions if you have questions.

Shaving the Scrotal Area

Shaving the scrotum prior to surgery is **important to reduce the risk of infection and poor wound healing**. Many men are anxious about this procedure, or uncertain about the technique. Here is some tips to help.

The Area to Shave



Surgery involves making **two horizontal incisions**, one on each side, on the **front of the scrotum**, about 1 inch long each, and 1/2 to 1 inch below the penis. The **area to be shaved** is the **front and sides of the scrotum**, the **shaft of the penis** (especially the underside and the sides), and a **small area on either side of the penis**, about 1/2 to 1 inch onto the inguinal (groin) area. It is not necessary to shave the pubic area — the area above the penis.

The Shaving Technique

- **Avoid electric razors** as they tend to pull the hair follicles, leaving razor burn.
- **Trim any hair** in the area to shave with a **scissors** or **beard trimmers** to a length of about 1/4 to 1/2 inch (shorter is better), This will make shaving much easier.
- **Take a hot shower or bath** before beginning shaving, washing the genital area well. Your hair will be softer and easier to remove. Shaving in the shower is also a good idea if your light is good enough.
- **Use a new, high-quality razor**, multiple blades are better. Do not skimp on cheap or dull blades!
- **Lather the area well** with shaving soap or gel, **avoiding mentholated products** as they will irritate the skin.
- The **key to shaving the scrotum without nicks** or cuts is to **stretch the skin taut**. This is done with the thumb and forefinger of your non-dominant hand (i.e., the left hand

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if you are right-handed). Use a **light touch** and **multiple light strokes** rather than a single firm stroke as you would on your face. Good lighting is important.

- **Rinse** well and **dry** the area gently.
- Apply a **non-alcohol** moisturizing product such as **aloe vera gel** or a moisturizing hand lotion when you are done.

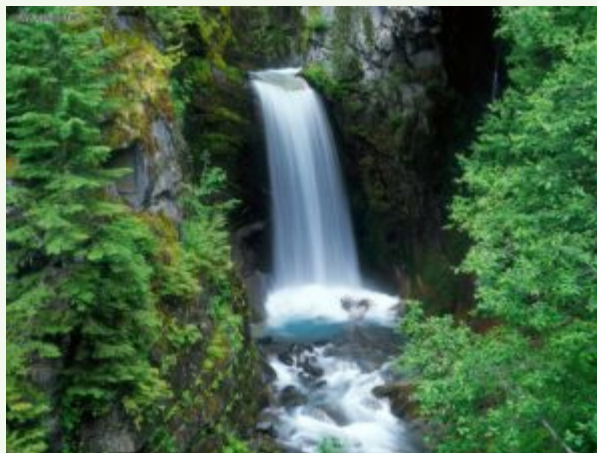
Small nicks are not a risk for surgery but may increase the skin irritation during healing.

NEVER use hair removal creams (e.g. Nair) as they are extremely irritating to the delicate skin of the scrotum.

Your Reversal Surgery

Vasectomy reversal, unlike vasectomy, is a **lengthy surgery**, and therefore cannot be safely or satisfactorily done in an office setting. Many reversal clinics, however, use the approach of using sedation in conjunction with local anesthesia in an office operating suite to keep costs down.

Dr. Finnerty has had extensive experience with this approach, but now **only** performs vasectomy reversal under **general anesthesia** in an outpatient surgical facility. While many men can be done safely under sedation, about 5-10% will become restless or require large amounts of sedation to be comfortable. Such situations can become **hazardous** and can greatly impair the ability to do a precision microsurgical repair. We see several patients a year who have had reversals performed in an office setting which have subsequently failed.



Reversal surgery is performed in an ambulatory surgical center. You check into the facility in the morning, and by evening are recovering in the comfort of your own home. This way, your safety and comfort can be best assured by providing the latest technology, using highly trained anesthesiologists and nurses in state-of-the-art surgery suites, and Dr. Finnerty can concentrate fully on giving you the best technical repair

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About Anesthesia



Vasectomy reversal surgery takes a considerable amount of time, generally **lasting between 2 1/2 to 3 1/2 hours**, due to the need for meticulous and delicate precision placement of microsurgical sutures.

Dr. Finnerty **requires general anesthesia** in *all* cases of vasectomy reversal surgery, unless there is a compelling **medical** reason for not doing so (which is very rare).

Using current outpatient anesthesia techniques, general anesthesia is **extremely safe**, and recovery is typically

smooth and comfortable for most patients.

Our anesthesia staff are all **board-certified physicians**, and are experienced in every aspect of anesthesiology, from outpatient surgery to major heart and trauma surgery. You will be under the care of experienced and highly qualified physicians with state-of-the-art training and equipment, dedicated to making your surgery experience a safe and pleasant one.

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After Your Reversal Surgery

For most patients, recovery from reversal surgery is smooth, comfortable, and uneventful. Nevertheless, it is important to **follow certain guidelines** to minimize your risk of discomfort or complications and give your surgery the best chance for success.

The following instructions are provided to assist your recovery from your vasectomy reversal surgery. Please read and follow this advice carefully and contact us if you have any questions.



- It is important to remain at **bed rest** for the first **48 hours** after the procedure.
- An **ice pack** should be applied to the scrotal area during this time, 20 minutes on and 40 minutes off. Avoid direct contact between the ice pack and the skin.
- Some swelling of the scrotal area is normal for the first few weeks. Minor bruising of the skin is also common. If the swelling is severe and associated with increased pain or severe bruising, or if there is continued bleeding from the incisions, this should be reported to the doctor.
- You may **resume light activities** after 48 hours. You should avoid heavy lifting, strenuous exercise, or prolonged standing for at least **14 days**, and in some men with very physical jobs, a longer time is often needed.
- You should **avoid sexual activity** of any kind for **at least 14 days** after the surgery. Failure to adhere to this may result in an unsuccessful surgical result.
- Wear a **scrotal support**, support briefs, or snug-fitting Jockey shorts for **7-10 days**.
- The **sutures (skin stitches)** dissolve on their own, usually **in about 10-14 days**. A small amount of drainage is common, especially after 4-5 days, and occasional slight bleeding when the sutures come out. This will stop when the sutures are gone. If there is redness, swelling, or excessive drainage from the incisions, especially after 3-5 days, this should be reported to us.
- **Avoid using topical antibiotic creams or ointments** (such as Bacitracin, Neosporin, or triple-antibiotic cream) unless instructed to do so. These are generally unnecessary and may actually **increase** the infection risk or cause allergic reactions.
- **You may shower** after all bleeding from the incision has stopped. This is generally about 48-72 hours.

Reversing Your Vasectomy

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Complications of Vasectomy Reversal

Vasectomy reversal surgery is extremely safe, and serious complications are very rare. Possible complications may include:



- **Bleeding from the incisions** – a small amount of bleeding is common and for 1-2 days after surgery. Ongoing bleeding is unusual and is virtually always stops without further treatment.
- **Bleeding within the scrotal sac (hematoma)** – extreme care is taken at surgery to control even minor bleeding, but on rare occasion a substantial amount of blood can collect inside the scrotum, causing swelling and discomfort. In most cases this will not require additional treatment, although it can prolong the recovery from surgery considerably.
- **Infection** – minor infections of the incisions may occur on occasion and are typically treated with local care measures and antibiotics. Serious infections inside the scrotal sac are extremely uncommon.
- **Prolonged postoperative pain** – most men have mild discomfort after surgery which generally resolves within 3-6 weeks. On occasion, the pain will persist longer. Long-term pain after vasectomy reversal is very unusual.
- **Testes atrophy (shrinkage)** – The blood flow to the testes is redundant and is carefully protected during reversal surgery. In extremely rare instances, blood flow to the testes may be impaired after surgery, resulting in shrinkage of the testes.
- **High-riding testes** – the testes will often sit higher in the scrotal sac after surgery, due to tissue swelling from surgery. In most cases this will resolve with time (3-6 months). Occasionally the testes may remain at a higher scrotal position long term; this is often the case when the original vasectomy has been performed very high in the scrotum. This generally does not cause any problems, however.

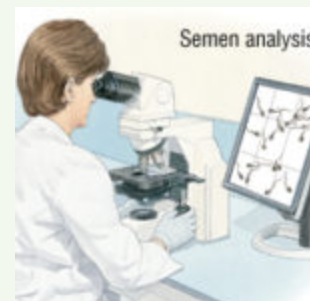
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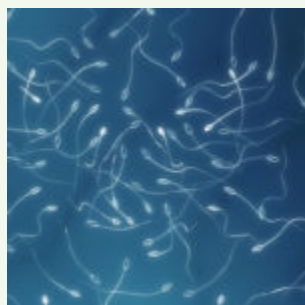
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Checking Fertility After Surgery

A full **semen analysis** (sperm count) should be performed **4-6 months after your repair**. The timing of your follow-up semen analysis will depend on which type of surgery was performed. Counts obtained earlier than this time may be low or even zero due to surgical swelling. Testing too soon can lead to needless anxiety about your surgical outcome.



Keep in mind that, depending on the type of repair (VV vs. VE), there can be a **wide variability** in the time before sperm will be seen in the ejaculate fluid. In most patients who undergo primary vas-to-vas repair (**VV**), sperm will return to the ejaculate fluid within 3-6 months. Epididymal repairs (**VE**), on the other hand, can take considerably longer: It is unusual to see sperm before 6-9 months, and in many cases may take a year or more. This is due to the extremely delicate nature and small size of the epididymal tubule.



Your sperm count should be performed by an independent or hospital lab if you live outside of our area. We generally encourage patients to **use a laboratory associated with a fertility clinic** if possible, since the high volume of semen analysis studies they perform generally result in more consistent and accurate results. Semen analysis is not an automated test but depends on the training and experience of the lab technicians performing it to get accurate results. Be sure to verify that a **full semen analysis** is performed; labs will sometimes perform a **post-vasectomy test**, which only checks for the presence or absence of sperm and provides no useful information regarding fertility.

Once you have found a suitable laboratory for your semen analysis, contact us so that we may send them a laboratory requisition.

Dr. Finnerty will review your results when available and contact you to discuss them.

Costs for semen analysis can vary widely with different labs, so it may be of benefit to check around with local laboratories regarding their pricing for this test.

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About Dr. Finnerty

Dr. Finnerty received his medical degree from **Georgetown University School of Medicine**, and his Urology specialty training at **Madigan Army Medical Center** in Tacoma, Washington. He served as **Chief of Urology** at **General Leonard Wood Hospital** at Fort Leonard Wood, Missouri. He has been in practice in the Pacific Northwest since 1983.

He is board certified in Urology, a Fellow of the American College of Surgeons, and a member of the American Society of Reproductive Medicine.

Dr. Finnerty was an early adopter of microsurgical techniques for infertility and vasectomy reversal, and began performing reconstructive microsurgery in the 1970's. He has one of the most extensive experiences in microsurgical vasectomy reversal in the country, having personally performed over 4000 reversal surgeries. Dr. Finnerty has performed reversal surgeries on patients from all over the country, as well as overseas.



You may contact Dr. Finnerty by email at info@micro-reversals.com.