

# Patients guide to Vasectomy Reversal.

## Introduction

Roughly 5% of all men who undergo vasectomy will end up having this reversed. Bearing in mind that vasectomy is the 2<sup>nd</sup> most common operation performed after cataract operations, this amounts to lots of men having a reversal. So you are not alone!

Vasectomy reversal can be effective regardless of how long it's been since the original vasectomy. As a general rule, if the reversal re-establishes patency (ie sperm in the ejaculate), then the chance of pregnancy decreases by 10% for every year elapsed after the original vasectomy. So 3 years after vasectomy you have  $\pm 70\%$  chance of pregnancy, after 5 years a  $\pm 50\%$  chance and after 8 years a  $\pm 20\%$  of pregnancy. It is still possible to achieve pregnancy beyond 10 years after a vasectomy but the chances are reduced. It should be noted that female partners over 35 years of age have a reduced chance of becoming pregnant.

## What techniques are available?

There are 2 ways of rejoining the small tube called the vas

1. with the naked eye or magnifying glasses called loupes
2. using a special operating microscope (microsurgery)

Many studies have demonstrated that the best way of doing this operation is to use micro-surgery. Your surgeon may perform either a:

- **Vasovasostomy** With this procedure, the surgeon sews the severed ends of the vas deferens back together. However, sometimes this isn't possible and a more complex surgery is needed to restore the flow of sperm.
- **Vasoepididymostomy** This surgery attaches the vas deferens directly to the epididymis, the coiled tube on the back of each testicle where sperm matures. A vasectomy can cause blockages or a break in the vas deferens or the epididymis. This surgery is used when a vasovasostomy won't work because sperm flow is blocked. The vas deferens is connected to the epididymis above the point of blockage.

You will not know ahead of time which technique is needed. The surgeon will make the decision during the operation. You may need a combination of the two surgical techniques ie. a vasovasostomy on one side and a vasoepididymostomy on the other.

### **What are the success rates?**

Success depends on how you define it. Re-establishing patency ( an open tube) has a relatively high success rate( in my series 90%), but this says nothing about the quality of the sperm being produced. The true test is the pregnancy rate and here many factors play a role. These include

- the length of time since the vasectomy
- the technique used to perform the original vasectomy
- age of the female partner, the younger the better
- presence of antisperm antibodies

### **How much does it cost?**

Insurers generally do not pay for reversal procedures and neither does the NHS. The initial consultation is £150.

The price of the microsurgical vasectomy reversal is: £2300-£2500 depending on whether sperm is banked or not. This includes

- the surgeon's fee
- the anaesthetist's fee
- all hospital fees including theatre time
- semen tests at 6 and 12 weeks
- 1 post-operative consultation

### **What else do I need to know?**

Although vasectomy is a straightforward procedure and only takes 15-20 minutes. A reversal on the other hand more involved and doesn't always work.

I usually perform vasectomy reversals as a day-surgery procedure at Pinehill Hospital. It's a delicate, microsurgical procedure that can be done using a few different surgical techniques.

- It is useful to include your partner at your initial consultation, if appropriate.
- Two weeks before and after your vasectomy, don't take aspirin, ibuprofen (Advil and Motrin, others) because they affect the platelets in your blood and can cause bleeding. Instead, use paracetamol or acetaminophen (Tylenol, others) if you need to relieve pain.

- Don't shave your scrotal skin for at least 2 weeks prior to surgery if you normally do this. This will be done in theatre just before your surgery.
- The surgery usually takes two to four hours. You'll also need time to recover from anesthesia. Arrange for someone to drive you home after surgery.

### **What can you expect during the procedure?**

You may have general anesthesia to make you unconscious during the surgery. Or, your surgeon may use an epidural, spinal or local anesthetic. In any case, your anesthesia will need to keep you completely still because the surgery is so delicate. It's done using a microscope that magnifies the surgery area five to 20 times, and any movements are magnified by the operating microscope.

The surgeon will make a cut on the underside of your scrotum, expose the testicle, and release it from surrounding tissues. Next, he or she will cut open the vas deferens and examine the fluid inside.

### **Fluid assessment**

Once the vas deferens has been opened, the surgeon will do a naked-eye inspection of the fluid that comes out as well as examine a drop of the fluid under a microscope. This is an important part of the operation because it helps your doctor determine what type of surgery you need to restore the flow of sperm.

- If the fluid contains sperm and plenty of clear fluid, surgery to reconnect the ends of the vas deferens — a vasovasostomy — is likely to work.
- Fluid below the vasectomy site that is thick or pasty, or that contains no sperm or partial sperm, can be a sign that there is scar tissue blocking the flow of sperm. In this case, attaching the vas deferens directly to the epididymis — a vasoepididymostomy — may be the best option.

### **Sperm banking/Freezing sperm**

All men should be given the opportunity of banking sperm at the time of your procedure. You should consider this carefully in the event that reversal does not work. This adds an additional cost of a few hundred pounds, and you will be charged annual storage fees by the fertility centre. You will also need blood tests for Hepatitis B & C and HIV prior to storage as required by the HFEA. If after vasectomy reversal you're not able to father a child through sexual intercourse, your frozen sperm may be injected directly into an egg. This is a type of in vitro fertilization (IVF) is called intracytoplasmic sperm injection (ICSI).

## **After surgery**

Immediately after surgery, your doctor may cover the incisions with dressings. You will be given an athletic support to apply some pressure to reduce swelling and movement. As the anaesthetic wears off, you may have some pain and cramping that can be relieved with pain killers. For most men, the pain isn't severe and gets better after a few days to a week.

After you return home, take it easy. You may be sore for several days, which you can treat with analgesics. You may also have bruising, but the discoloration should lighten and disappear after about two weeks. Any stitches should dissolve in 10-14 days.

- For the first two days after surgery, avoid bathing and swimming.
- Refrain from sports and heavy lifting for at least three weeks.
- If you have a desk job, you'll probably be able to return to work three days after surgery. If you perform physical labour or have a job that requires much walking or driving, talk to your doctor about when it's appropriate to resume working.
- You shouldn't have sexual intercourse or ejaculate for about 3-4 weeks. At that point, you may resume sexual activity.
- Wear the athletic support for several weeks at all times, except when showering. After several weeks, you'll need to continue to wear a jockstrap during exercise.

## **Results**

In successful vasovasostomy, sperm usually appear in the semen after a few months. After a vasoepididymostomy, it takes longer — from three to 15 months. Vasectomy reversal leads to pregnancy in about 52 percent of couples within two years. While some pregnancies occur within a few months after a vasectomy reversal, the average is about a year after the procedure.

Sometimes problems with conception are due to female infertility. When the female partner doesn't have fertility problems, couples are more likely to conceive a child after a vasectomy reversal.

Your surgeon will want to examine your semen after surgery to see if the operation was successful. Unless you achieve pregnancy, a sperm count is the only way to tell if your vasectomy reversal was a success.

## **If vasectomy reversal doesn't work**

Vasectomy reversals sometimes fail if there is a sperm blockage that wasn't

recognized during surgery, or if a blockage develops sometime after surgery. Some men have a second-attempt vasectomy reversal if the procedure doesn't work the first time.

Experts are investigating whether anti-sperm antibodies — proteins that develop after a vasectomy — might interfere with fertility after vasectomy reversal. Research shows anti-sperm antibodies can inhibit the function and movement of sperm, but experts are still not sure about their effect on fertility after a vasectomy reversal.

## Risks

Risks of vasectomy reversal include:

- **Bleeding within the scrotum.** This may lead to a collection of blood called a haematoma, that causes painful swelling. You can reduce this risk by avoiding aspirin before and after surgery and following your doctor's instructions to rest after surgery.
- **Infection at the surgery site.** This isn't common, but is a risk with any surgery.
- **Inflammation.** Sperm leakage into the scrotum can prompt your immune system to form an inflammatory mass called a sperm granuloma. Granulomas usually occur sometime after surgery and can be a sign that a vasectomy reversal wasn't successful.
- **Damage to nerves and blood vessels.** In some cases, this reduces fertility after a vasectomy reversal.

Call your Consultant if you develop any of these signs and symptoms:

- Fever
- Swelling that worsens or won't go down or discharge from the wound
- Difficult urination
- Pain in 1 or both testicles
- Bleeding from an incision that continues after compression