

FACTSHEET

VASECTOMY REVERSAL

Vasectomy is a simple and reliable method of preventing pregnancy. However, some men regret having it done and approximately 3% of men who have had a vasectomy will later request a vasectomy reversal. These requests are more common if the vasectomy has been carried out at a time of personal or emotional crisis or following divorce.

It is important that a vasectomy should not be considered a readily reversible method of birth control, however, as even in the best hands, pregnancy rates are less than 50% following reversal.

Before a vasectomy

The sperm produced by each testicle collects in a tightly coiled tube called the epididymis. It is during their passage through the epididymis that the sperm achieve their ability to move and fertilise an egg. The epididymis leads into a thicker tube called the vas deferens. This can be felt in the scrotum of most men. This thicker tube leads on into the urethra (the tube within the penis). It takes approximately 60 days for a sperm to be produced and a further 14 days to make the journey through the epididymis and vas deferens.

The vasectomy operation

This operation involves cutting and removing a section of the vas deferens on each side so that the passage of sperm is interrupted and it cannot reach the outside world. However, men produce sperm continuously from the time of puberty and continue to do so after vasectomy. The operation does not interfere with the other functions of the testes, such as producing male hormones.

After vasectomy

The sperm produced by the testes has nowhere to go after a vasectomy and collects in the epididymis. This may result in swelling of the epididymis, sperm leakage and scar formation in the epididymis. These “after effects” are only important if vasectomy reversal is contemplated.

Vasectomy reversal

Most operations require a general anaesthetic or possibly a regional anaesthetic like an epidural, although procedures are sometimes performed under local anaesthetic. The operation can take up to three hours, but can usually be performed as a day case procedure. However, seven to ten days convalescence is required after the operation to assist the healing process.

One or two vertical cuts are made in the scrotum to expose the cut ends of the vas deferens. The surgeon may then check to see if sperm are present in the fluid that leaks out of the end of the vas deferens. If there are no sperm, there may be a blockage in the epididymis and a more complicated procedure may be needed (vaso-epididymostomy - see below). Repeat reversal attempts have a very low chance of success.

Methods of vasectomy reversal:

Vasovasostomy: Here the cut ends of the vas deferens are stitched together. In 80- 90% of cases the vas deferens is clear and unblocked (patent) by the end of the operation. However, only 30- 40% of patients achieve a pregnancy following vasectomy reversal.

Vaso-epididymostomy: Here the cut end of the vas deferens is joined to a minute tube within the epididymis. Results achieved by this method are less good than with vasovasostomy. A poor outcome can be expected if there has been more than ten years since the original vasectomy was carried out or if too much of vas deferens was removed at the time of the original operation

Very rarely the testes may shrink (atrophy) due to damage to the blood supply at the time of operation.

Difference between patency and pregnancy rates

Even if the tubes are open (patent) after a reversal operation and sperm appear in the ejaculate, not every couple will achieve a pregnancy as the semen quality after vasectomy reversal may be poor. Furthermore, scar tissue can form which may end up causing a further blockage. Some couples may wish to consider freezing sperm following vasectomy reversal. These samples can then be used should a re-blockage subsequently occur.

In-vitro fertilisation may be considered if a couple don't get pregnant after a vasectomy reversal. Intracytoplasmic sperm injection (ICSI) where an individual sperm is injected into an egg can help achieve fertilisation.

Follow-up after reversal

Sperm may appear in the ejaculate up to a year after vasectomy reversal. If this does not happen, then the vasectomy reversal is unlikely to work.

The female partner should already have had tests carried out to check her fertility too. If there are any problems with her fertility, then surgical sperm retrieval and ICSI may be the best options rather than vasectomy reversal

Percutaneous Epididymal Sperm Aspiration (PESA) and Microsurgical Epididymal Sperm Aspiration (MESA)

Where vasectomy reversal has been unsuccessful, sperm may be retrieved surgically. The retrieved sperm is often fragile with low motility. However, fertilisation can often be achieved with IVF/ICSI. Occasionally reconstructive surgery can be performed at the same time. PESA or MESA can also be performed for patients with congenital absence of the vas or irreparable damage to the vas or epididymis.

These methods of assisted reproduction are successfully achieving pregnancies for couples who do not wish to consider vasectomy reversal or donor insemination.

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