

Sperm Extraction Techniques

Also called “surgical sperm retrieval”

Sperm extraction techniques may form part of your treatment if you suffer from male infertility. They are carried out in addition to IVF with ICSI. They may help you if you have been told that you have no sperm or too few sperm in your ejaculate (semen).

Would sperm extraction be a suitable option for me?

Sperm are produced in the testicles. They begin their lives as immature cells and then develop into mature sperm with tails. When sperm reach maturity, they leave the testicle. They are stored in a collection of long tubes next each testicle called the “epididymis”. A long, slim tube called the “vas deferens” connects the epididymis to the penis. The testicles, epididymis and vas deferens are surrounded by a loose sack of skin called the scrotum.

When you ejaculate (have an orgasm) the sperm move out of the epididymis, along the vas deferens and towards the penis. Along the way, they are mixed with other fluids. The sperm are expelled from the tip of the penis, mixed with these fluids. This is what makes semen.

However, problems can occur at any stage. These problems can result in you having no sperm or too few sperm in your semen. This can lead to difficulty conceiving a child.

Problems that can occur include blockage of the tubes that carry sperm from the testicles to the penis. For example, the vas deferens can become blocked by scar tissue if you have had an infection of the testicles in the past. You may have been born without a vas deferens. Also for some men, ejaculation is impossible due to difficulty achieving an erection. In other men, the sperm go in to the bladder when they ejaculate, instead of into the penis.

If you experience such a problem, then sperm extraction techniques can be used to remove sperm from your testicles or your epididymis. The retrieved sperm can then be used to fertilise your partner’s eggs by ICSI.

Sperm extraction techniques are minor surgical procedures. There are several methods that are used to extract sperm. The method that is right for you will depend on the reason why you do not have enough sperm in your ejaculate. The doctor who you see about your fertility problems will recommend the right procedure for you, based on your individual case.

TESE

TESE stands for “testicular sperm extraction.” It involves taking a small piece of tissue from your testicles and examining it under a microscope, to see if it contains sperm. These sperm can then be extracted and used in your treatment.

TESE may be recommended if you have been diagnosed with infertility caused by a blockage in your epididymis or testicles. This blockage means that your sperm are unable to leave the testicles.

TESE is a minor surgical procedure. The doctor will inject a local anaesthetic to numb your scrotum and your testicles. A small cut will be made in your scrotum to reveal the testicles beneath. The doctor will cut away a small piece of the testicle. This will be sent to the laboratory, where the laboratory team will extract the sperm from the testicular tissue. These sperm can then be injected into your partner's eggs - see [ICSI](#).

PESA

PESA stands for "percutaneous epididymal sperm aspiration." It involves using a fine needle to suck sperm out of the epididymis (the place where sperm are stored).

Your doctor may recommend that you try PESA if your infertility is caused by a blockage or absence of the vas deferens (the tube that carries sperm from the epididymis to the penis).

The doctor will inject a local anaesthetic to numb your testicles and scrotum. A fine needle will be passed through the scrotum and in the epididymis. This needle will be used to gently suck the sperm out of the epididymis. The doctor may need to insert the needle in several different places in order to suck out as many sperm as are needed. The sperm can then be used in the laboratory to fertilise your partner's eggs - see [ICSI](#).

If you are considering the possibility of using sperm extraction techniques to help you conceive then the best person to talk to is the doctor who is managing your fertility problems. He/she will be able to help you weigh up the risks and benefits of using these techniques, as well as discussing alternative options with you, such as the use of donor sperm.