Treating male infertility

There are not many treatments that will improve the quality of the sperm themselves. There are however a number of treatments available to help the couple to make the best of sperm quality as it is and achieve a pregnancy. While in the past many had to resort to donated sperm, today we can literally produce a pregnancy from a single sperm.

Reversible conditions

Poor semen analysis results can be caused by failure to follow correct specimen collection instructions, recent illness, recent drug treatments, heavy alcohol consumption, steroid hormone use, obesity and frequent hot baths or saunas. You should tell your doctor if any of these are involved. There may be medical or environmental causes for damaged sperm DNA.

Drug treatment

Few simple drug treatments will increase sperm numbers or make sperm swim or look better. Some men however produce low sperm numbers due to low reproductive hormone (gonadotrophin) levels. Gonadotrophin treatment can help them to produce more sperm in each ejaculate.

Intrauterine insemination with partner semen (AI)

Where the sperm abnormalities are not too severe, the relatively simple procedure of washing and preparing a concentrated sample of the male partner's sperm and inseminating this directly into the uterus of the female is a good option.

In vitro fertilisation and embryo transfer (IVF-ET)

IVF can be of considerable help in cases of substandard sperm quality. The semen is prepared to select the most strong swimming sperm which are then placed with the eggs in a dish in the laboratory. This produces fertilisation in about 90% of male infertility cases.

Assisted fertilisation by microinjection (ICSI)

The Intracytoplasmic Sperm Injection (ICSI) of eggs has revolutionised the treatment of males with severe sperm abnormalities. The sperm injection is performed as an additional part of the IVF procedure. As long as the sperm are alive, the degree of severity of the abnormalities in their motility or morphology has no effect on this technique's success. Where there are no sperm in the ejaculate, sperm surgically retrieved from the epididymis (micro-epididymal sperm aspiration or MESA) or the testes themselves (testicular sperm aspiration or TESA) are used in this procedure.

Digital High Magnification

A number of approaches have been tried to deal with the problem where there is a high level of DNA fragmentation in the sperm. At Virtus Fertility Centre we now have an advanced technique called Digital High Magnification enabling scientists to view and select the healthiest sperm most likely to produce a viable pregnancy via ICSI.

Donor insemination

For some couples confronted with severe male infertility they may elect to accept the option of the female being inseminated with donated semen. The semen comes from donors who are screened for genetic and infectious diseases. To accept donor semen can be a difficult decision and couples are required to have a consultation with one of our counsellors to discuss all aspects, both present and future, of this treatment before proceeding.

Virtus Fertility Centre

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Find us

MRT Station	Nearest is Orchard MRT Station
Bus Stop	Alight @ Royal Plaza Hotel Bus Nos. 5, 54, 124, 128, 143, 162, 162M, 167, 171, 700, 700A, NR1, NR2, NR3
Parking	Available in the basement of Pacific Plaza *Entrance via Claymore Hill

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Male Fertility

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Male factor infertility affects around half of all infertile couples. It is the single biggest factor stopping a couple from conceiving after a woman's age. Fortunately, most common causes of male infertility are readily diagnosed and most can be treated or overcome to help a couple conceive successfully.

Common causes of male infertility

- Blocked/absent vas deferens
- Low sperm numbers and/or poor sperm movement
- High numbers of abnormal shaped sperm
- Antisperm antibodies
- Failure of sperm production

Virtus Fertility Centre provides a comprehensive service covering all aspects of male infertility. Our fertility specialists are qualified in dealing with both male and female reproductive health. The services we offer include:

- Fertility assessment
- Semen Analysis (SA)
- Sperm Antibodies and DNA
- Fragmentation Assay (SCSA)
- Hyaluronan Binding Assay (HBA)
- Trial Wash
- Post vasectomy sperm assessment
- Retrograde

Male reproductive system

Unlike women who are born with a limited number of eggs, men produce new sperm every day of their life. Sperm takes 72 days to be produced, then a further 12 days to travel through the epididymis to the ejaculate.

Essentially, there are four key components necessary to achieve satisfactory sperm production and a pregnancy:

- normal hormonal stimulation from the pituitary gland
- normal sperm production in the tubules of the testes
- an unobstructed sperm pathway
- effective natural sperm delivery

Causes of male infertility

Common causes of male infertility include lifestyle factors, problems with sperm, including sperm antibodies, chromosome and DNA abnormalities, hormonal problems and erectile and ejaculation difficulties.

Assessing male fertility

A semen analysis test, which can be conducted at our andrology laboratory in the Virtus Fertility Center, is the first, and usually the only test required in diagnosing if a man has a problem with his fertility.A semen analysis involves one of our experienced andrologists examining a semen sample under a microscope. The andrologist will check the sample for:

Sperm density
There should be at least 15 million sperm per millilitre of semen

Sperm motility (movement)
At least 40% of the sperm in the sample should show forward progressive movement

Sperm morphology (shape)
At least 4% of the sperm should have a normal shape (head and tail)

If initial results indicate an abnormal result with a man's sperm, Virtus Fertility Centre will request the test be repeated in approximately three months. This is because sperm has a life cycle of 72 days. Life experiences such as illness or stress can temporarily affect sperm production quality. It is also important to note that smoking, excessive alcohol use and recreational drug use can all impact sperm production.

Semen analysis is a time-critical test so appointments are essential. Please telephone the Clinic.

The sample can be collected at home and delivered for analysis within one hour. Alternatively, our clinic has facilities for on-site collection.

Sperm antibodies

The presence of sperm antibodies has been linked to infertility It has been estimated that as many one in 16 men produce antibodies to their own sperm. They are commonly found in men after vasectomy or injury or infection of the epididymis, though in some cases, there is no explanation.

These antibodies can interfere with sperm motility and fertilisation. A blood test, in conjunction with a semen analysis, can confirm the presence of sperm antibodies. Anti sperm antibodies should affect less than 50% of the sperm. If present, conception is still possible using Intracytoplasmic Sperm Injection (ICSI). This is a technique were a single sperm is selected for injection directly into an egg.

Detecting DNA damage in sperm

The genetic material contained with the nuclear part of the head of a sperm is known as chromatin. The integrity of the chromatin is important and the amount of chromatin that is damaged is critical as affected sperm may not be able to fertilise eggs. The sperm of most men have at least a small component of their chromatin damaged in some way.

This damage can be detected using several tests. However a recognised test called Sperm Chromatin Structure Assay (SCSA) has been shown to be reproducible and accurate.

If a SCSA test detects a significant level of chromatin damage, lifestyle changes and improvement of general health may correct this. There is also a belief that increasing the ejaculation frequency can help. Some antioxidant supplements have also been shown to be useful, but this is not the case for all men.