

## Navigating your Fertility Journey: The Importance of Semen Analysis with DNA Fragmentation Assay

40% of couples with fertility concerns have an influencing factor from the man's side.

Our male infertility and andrology services can help to diagnose the issues, such as poor quality sperm or low levels of male sex hormones. After gaining a thorough understanding of the cause of your infertility, your fertility specialist will then develop the best treatment plan to help you have a baby.

### Understanding sperm health

On your journey towards starting a family, understanding every aspect of your fertility is crucial. A key component in understanding your fertility health is understanding the DNA integrity of your sperm, or the quality of your sperm, which is crucial for successful conception and a healthy pregnancy.

Standard semen analysis tests assess the size and shape (morphology), movement (motility) and the number of sperm you have, but unfortunately it cannot tell you about the quality of these sperm. You may have lots of sperm that are swimming in the right direction, but if the quality of these sperm is not optimal then problems with conceiving will occur.

### What's involved in a semen analysis?

You will need to produce a semen sample in a private room at our clinic or bring it into our Andrology lab. It is essential to first make an appointment with our laboratory so that the semen sample can be analysed within one hour, in order to avoid compromising the sample.

Our andrology scientists then assess semen appearance, colour, pH and Leukocyte presence. They count the sperm numbers (concentration) and the sperm motility (how fast sperm are moving).

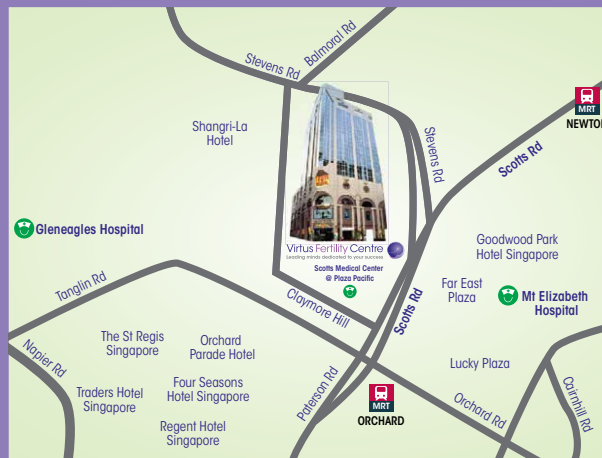
The morphology (shape) of sperm is also assessed. If indicated, the sperm vitality can also be counted (the percentage of immotile sperm that are alive or dead) based on the effects of a dye on the sperm.

If we find abnormalities, we often require repeat tests to assess the type and degree of the problem, and whether it is a persistent feature. Sperm have a lifecycle of 72 days, so if you are ill or stressed it can temporarily affect your sperm production quality.



### Virtus Andrology Laboratory

9 Scotts Road  
#10-01 Scotts Medical Centre @ Pacific Plaza Singapore 228210  
T +65 6460 4848 F +65 6235 0380  
[enquiries@virtusfertilitycentre.com.sg](mailto:enquiries@virtusfertilitycentre.com.sg)



### Find us

**MRT Station** Nearest is Orchard MRT Station

**Bus Stop** Alight @ Royal Plaza Hotel  
Bus No's. 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

## Semen Analysis



Virtus Andrology Laboratory



**VirtusFertilityCentre**  
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## Common causes and lifestyle factors of male infertility

Problem	Diagnosis	Fertility treatment
Obstructive azoospermia (Blocked/Absent Vas or Vasectomy)	Absence of sperm in the semen on two occasions	Vasectomy reversal, Reconstructive surgery for obstruction if feasible, Fine needle sperm aspiration done under local anaesthetics and usage of retrieved sperm for ICSI.
Non-obstructive azoospermia (failure of sperm production)	Absence of sperm in the semen on two occasions. Targeted investigations needed to find out cause and give prediction for sperm retrieval following Micro TESE.	Micro TESE or Donor Sperm
Oligospermia/ OligoAthenospermis (Low sperm numbers and/or movement)	Diagnosed with a simple semen analysis. Smoking, alcohol and recreational drug use can all impact sperm production.	ICSI
Antisperm antibodies	Men can develop antibodies against their own sperm. This is most common in men who have had a vasectomy. This can be diagnosed through more sophisticated techniques conducted as part of a semen analysis.	ICSI

Lifestyle factors	
Smoking	<ul style="list-style-type: none"> <li>◆ Damages sperm DNA</li> <li>◆ Increases risk of miscarriage</li> <li>◆ Children born to a male smoker are four times more likely to develop a childhood cancer</li> </ul>
Alcohol	Excessive alcohol consumption is known to affect fertility
Obesity	Overweight men are twice as likely to have a low sperm count and low sperm motility – the likelihood is threefold in obese males

### What is Semen Analysis with DNA Fragmentation Assay?

The highly specialised Semen Analysis with DNA Fragmentation Assay goes beyond the traditional semen analysis parameters and assesses the quality of the sperm by looking at the integrity of the sperm DNA, a crucial factor for fertilization and embryo quality.

DNA-damaged sperm is one of the leading causes of conception challenges and miscarriage, with current research showing 7 out of 10 men suffer from DNA-damaged sperm.

For men aged 25-45 actively trying to conceive, this in-depth analysis is not just informative, it's crucial. By identifying the extent of DNA damage in sperm, we can offer more targeted and effective treatment options, significantly enhancing your chances of conception and a successful pregnancy.

### Fine Needle Testicular Sperm Extraction (TESE)

A form of testicular biopsy, used to extract sperm from the testes, if there is no sperm in the ejaculated semen (Azoospermia).

This is the first step in an ICSI (IntraCytoplasmic Sperm Injection) or IMSI (Intracytoplasmic Morphologically-selected Sperm Injection) cycle, where the sperm will then be injected into an egg during IVF. This procedure is a 'closed' surgery where testicular tissues are not exposed. It's undertaken using local anaesthesia and has a relatively short recovery and healing period.

Fine needle TESE can be used to determine availability of sperm in the testis before patient's partner is prepared for ovarian stimulation. The process may be repeated immediately after egg collection to provide fresh sperm for fertilisation.

Conventional TESE is an 'open' surgery where testicular tissues are exposed and snipped for diagnosis and/or ICSI treatment. Conventional TESE requires general anaesthesia and has a longer recovery and healing period.

If you are trying to conceive, we recommend starting with a Semen Analysis or a Semen Analysis with DNA Fragmentation. Speak to your Doctor on which test is right for you.

#### How to request a test

If you are trying to conceive, we recommend starting with a Semen Analysis or a Semen Analysis with DNA Fragmentation. Speak to your Doctor on which test is right for you.

Visit [www.virtusfertilitycentre.com.sg/en](http://www.virtusfertilitycentre.com.sg/en) to book your appointment.