



Where are my sperm

Infertility issues are due to medical conditions in the man about half of the time, but fear not, many of these problems can be managed.

By Dr NAVDEEP SINGH PANNU

WHEN couples walk in to seek treatment for infertility, they walk in sync.

It is a non-blaming partnership with a strong desire to produce the outcome of holding that baby they so wish for.

While a minority of men still think that infertility is solely a female issue, most men have now become more accepting to the fact that they too could be a contributing factor as to why conception has not happened.

In my experience, I have seen my male patients breaking down and shedding tears when told of their infertility.

It is the wives who empathise with them and console their men that all is not lost and that there is hope.

With up to 30% of infertility cases being due to men and another 30% being due to both genders, men are the cause of infertility issues about half of the time.

It is much more prevalent than we think.

Indeed, with the escalating number of male infertility cases, the somewhat obscure field of andrology is becoming more widely known these days.

Andrology is the medical speciality that deals with male health, particularly the problems of the male reproductive system and urinary system that are unique to men.

Viewed as a stepsibling to obstetrics and gynaecology, andrology is considered a subspecialty of urology in Malaysia.

While there may be many reasons why a man could have infertility issues, the following are the more common conditions.

Hypogonadism

This is a condition where the body doesn't produce enough of the hormone that plays a key role in masculine growth and development during puberty, i.e. testosterone.

Symptoms that may occur include decreased libido, loss of body hair, abnormal breast growth, reduced growth of penis and testicles, hot flashes, fatigue, difficulty concentrating, decreased physical performance and reduced muscle mass, among others.

If a man is suspected to have hypogonadism, his sex hormone levels will be checked first.

A blood test is done to measure the levels of prolactin, FSH (follicle-stimulating hormone) and LH (luteinising hormone).

These are reproductive hormones made by the pituitary glands.

Depending on the type of hypogonadism and the patient's goals, hypogonadism can be treated through the following ways:

> Testosterone replacement therapy
This is the usual treatment for male hypogonadism, which is aimed at bringing the patient's testosterone levels back up to normal.

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In teratozoospermia, abnormal-looking sperm (seen here in red) comprise 96% or more of the man's sperm. — 123rf.com

Missing in action

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There are a number of formulations available for testosterone therapy, including intramuscular injections, transdermal patches and subcutaneous pellets.

The restoration of the patient's testosterone level to the normal range improves libido, sexual function and mood, and increases their lean body mass.

However, it should not be used if the man is planning for a baby as it will suppress sperm production.

> Clomiphene citrate

Clomiphene citrate acts to centrally increase the secretion of LH and FSH.

This will help increase the natural production of testosterone in the body, which in turn will help boost sperm count.

Azoospermia

This is a condition in which there is no measurable sperm in a man's ejaculate (semen), referred to as "no sperm count".

A man may not have any symptoms or even know he has azoospermia until efforts to conceive are unsuccessful.

Otherwise, possible symptoms could include low sex drive, erectile dysfunction, decreased hair on the face and body, or a lump, swelling or discomfort around the testicles.

The most basic way to diagnose azoospermia is through semen analysis.

If no living sperm is observed, one may have azoospermia.

Other diagnostic tools include blood tests to evaluate hormone levels, ultrasound to visualise the scrotum and other parts of the reproductive tract, and brain imaging to check on potential issues with the hypothalamus or pituitary gland.

Azoospermia is usually correctable depending on the cause; treatment options available include:

> Surgery to unblock tubes

Obstructive azoospermia may be treated through surgery by either reconnecting or reconstructing the tubes or ducts that aren't allowing the sperm to flow.

> Varicocelectomy

A varicocelectomy is a surgery

performed to fix a varicocele, which is an enlargement of the veins in the scrotum.

This procedure helps to restore proper blood flow to the reproductive organs and subsequently helps improve sperm count.

> Sperm aspiration (for conception)

Sperm aspiration can help men with non-obstructive azoospermia. Sperm is extracted from the testes with a tiny needle.

This type of sperm retrieval may also be done during a biopsy.

The sample retrieved can be kept frozen for later use in in-vitro fertilisation (IVF).

Oligozoospermia

Oligozoospermia is a condition where there is an abnormally low number of sperms in the semen sample.

This differs from azoospermia where there is a complete absence of sperms in the semen sample.

There are no obvious symptoms for this condition.

Most men only find out they have this condition when they are unable to conceive.

However, if there are symptoms, common ones include an enlarged scrotum, pain or lumps in the testicular area, inability to maintain an erection, ejaculatory issues, and pain while urinating due to infections.

The diagnosis of oligozoospermia is based on a low count of sperm in a semen analysis performed on two separate occasions.

From the semen analysis, oligozoospermia may be classified into various types depending on the quantity of sperm present:

> **Mild:** Between 10 and 15 million sperm per millimetre of semen

> **Moderate:** Between five and 10 million sperm per millimetre of semen

> **Severe:** Between zero and five million sperm per millimetre of semen

Some treatment options to treat oligozoospermia include:

> Surgery

A varicocele can be surgically corrected or an obstructed vas deferens can be repaired via an operation.

> Medication

When the oligozoospermia is

Keep your sperm healthy

Here are some dos and don'ts to help you prevent those types of male infertility that are avoidable.

Do



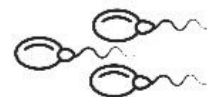
Eat well

A well-balanced and nutritious diet ensures good and healthy sperm production.



Exercise

Regular exercise can improve sperm quality and increase the chances of achieving pregnancy.



Sleep well

Having adequate sleep (about six to eight hours per day) helps the body repair itself and stay healthy, which will in turn promote good sperm production.



Lose weight (if overweight/obese)

Excessive fat in the body can cause reduced testosterone levels, and subsequently lower sperm production.



Wear loose underwear

Wearing loose underwear or boxers ensures the testes are at the ideal temperature to function at an optimal level.



Take supplements

Vitamins A, C and E, zinc, selenium and CoQ10 all contain antioxidants that are important for men's health.

Don't



Smoke

It is known that tobacco and combusted chemicals in tobacco products impair the reproductive ability of sperm.



Vape

Vaping has the same impact on sperm health as smoking, due to the chemicals being inhaled into the body.

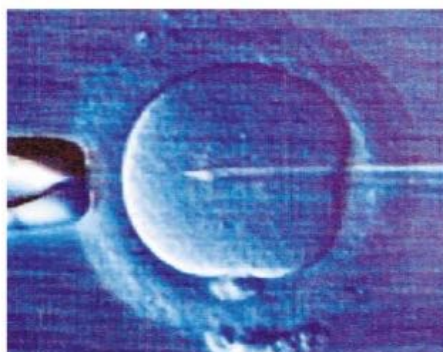


Stress out

Stress can decrease sexual function and interfere with the hormones needed to produce sperm.

Source: Dr Navdeep Singh Pannu

TheStar graphics



ICSI, where sperm is injected directly into the egg using a very thin needle, can be used for conception when the male partner has oligozoospermia or teratozoospermia. — Filepic

caused by hormonal imbalance, infection or inflammation, treatment will include medications and hormone injections that help restore the patient's hormones to a normal level and prevent a further drop in sperm count.

> Assisted reproductive techniques (ART)

ART such as IVF or intrauterine insemination (IUI), may help men with oligozoospermia have a child.

ART treatments involve obtaining the sperm through normal ejaculation, surgical extraction or from donor individuals, depending on the specific situation.

The sperms are then inserted into the female womb via IUI, or used in IVF or intracytoplasmic sperm injection (ICSI).

Teratozoospermia

While the most common cause of male infertility is a low sperm count, some men experience infertility due to abnormal-looking sperm.

This is called teratozoospermia. It is defined as abnormal sperm morphology (shape) caused by either defects in the sperm's head, midpiece and/or tail.

A man is said to have teratozoospermia when the percentage of normal spermatozoa in his semen

sample is below 4%.

A person may not have any symptoms or even know he has this condition until efforts to conceive are unsuccessful.

However, one possible symptom of teratozoospermia is decreased testicular size.

It is diagnosed through semen analysis, which should be performed following three to five days of abstinence from sexual activity.

To be considered normal, a sperm must consist of an oval head 5 to 6 microns in size, and be between 2.5 and 3.5 microns in diameter.

It must also have a middle part and a tail (or flagellum) of about 50 microns in length.

An examination of the semen sample will determine the type of defect the sperm has, e.g. globozoospermia (a round sperm head) or a short sperm tail.

With proper treatment, teratozoospermia can be fixed and a man may be able to conceive as long as other sperm parameters (such as sperm count and motility) are normal.

Fertility treatments that can help a man with teratozoospermia conceive include:

> IUI

This is where the patient's processed and concentrated sperm

sample is inserted directly into his partner's uterus, in order to increase the chances of fertilisation taking place.

> IVF

An ART where eggs and sperms are fertilised in laboratories.

Once there is successful fertilisation, the resultant embryo is then transferred to the woman's uterus to continue developing.

> ICSI

This tends to be the most successful fertility treatment for teratozoospermia as sperm with the best shape can be selected and micro-injected into the eggs directly, using microinjectors or micropipettes.

Don't despair

Finding out that a man has issues conceiving a child can be an extremely devastating and challenging experience for a couple.

My advice to couples is to always stay positive – there will be light at the end of the tunnel.

Not all male infertility issues are permanent or untreatable.

The first step is to accept the problem, then reach out and seek the right help.

That dream of cradling a baby may not be just a dream after all.

With the right help, it is absolutely possible to have that precious baby so wished for.

Dr Navdeep Singh Pannu is a fertility specialist. For more information, email starhealth@thestar.com.my. The information provided is for educational purposes only and should not be considered as medical advice. The Star does not give any warranty on accuracy, completeness, functionality, usefulness or other assurances as to the content appearing in this article. The Star disclaims all responsibility for any losses, damage to property or personal injury suffered directly or indirectly from reliance on such information.