



## Understanding the sperm test & male infertility

### What is male factor infertility and how common is it?

In about a third of couples complaining of infertility the main problem lies with the male. We also find that in up to half (50%) of couples with infertility, there is a problem with sperm. When there is a male problem there are insufficient numbers of normal sperm available to fertilise the female egg.

### How is it diagnosed?

The easiest way to identify a male factor problem is to do a “sperm test” otherwise known as semen analysis. Semen analysis should be undertaken in all couples seeking investigation for infertility regardless of whether there is an identified female problem or a suspected male factor problem. Even if the male partner has previously fathered children a semen analysis is necessary since problems may have developed in the intervening time.

### What is examined in a semen analysis?

The analysis is a useful test that reveals important information on several sperm parameters. These include, the number (concentration) of sperm, the percentage of the sperm which are moving (motility), as well as the quality of the movement (progression) and the proportion of sperm that are normally shaped (normal forms). Further tests include looking for the presence of antibodies to sperm. However, of all these sperm concentration is usually considered to be the most critical factor.

### What if the test is abnormal?

If semen analysis result is abnormal, further investigations may be necessary to establish the cause. Sperm test results vary and could be normal one day and abnormal the next. Therefore we sometimes request a repeat test. One test to further explore sperm function is a post coital test, where the ability for the sperm to swim in a partner’s cervical mucus is assessed, another way is to do an advanced sperm recovery test.

The causes of male infertility may be hormonal, genetic or physical. Exposure to certain chemicals and infections or illnesses could also hamper male fertility. However, in most cases no obvious cause is found. Sometimes, if the sperm count is borderline or slightly low, some of the following factors may be worth considering:

- **Was the sample ideal?** Was it taken to the laboratory in time? Was it kept warm? Cooling the sample or a delay in getting it to the laboratory can alter the number of active sperm, and give a false result.
- **High testes temperature.** It is often advised for men who have a low sperm count to wear loose fitting underpants and trousers and to avoid very hot baths, saunas, etc. This aims to keep your testes slightly cooler than the rest of your body, which is thought to be good for sperm production. While it is not clear whether these measures improve a sperm count, but they seem to be sensible.
- **Smoking can affect the sperm count.** If you smoke, you should stop completely for optimum sperm production.
- **Alcohol.** Excessive alcohol consumption and binge drinking may interfere with optimum fertility. Reducing intake may improve fertility.
- **Drugs and medicines.** Most do not interfere with sperm production, but some may do. These include: sulphasalazine, nitrofurantoin, tetracyclines, cimetidine, colchicine, allopurinol, some chemotherapy drugs, cannabis, cocaine, and anabolic steroids. If you have a low sperm count, tell a doctor if you take any drugs or medicines regularly.

### What can be done if male factor infertility is diagnosed?

There are very few causes of male infertility that can actually be treated that will improve chances of conception naturally. However, because in many cases sperm is present but in much reduced numbers, conception could still occur naturally.

In order to improve the chances of conception in male factor infertility, sophisticated methods are used known as assisted conception techniques. The most successful of these is Intracytoplasmic sperm injection (ICSI). ICSI is the process whereby a single sperm is injected directly into the egg and can be carried out even when there are very few sperm present. This technique has allowed many men to father children with their own genetic material where before sperm from a “donor” would have been used. Another option would be to undertake intra uterine insemination (IUI), where the best sperm are filtered and injected into the female partner’s womb at the time of ovulation.