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Sperm Test (Semen Analysis)

A sperm test (semen analysis) is usually advised if a couple is having difficulty becoming pregnant (conceiving). The aim is to see if the semen and sperm made by the male partner are normal or not. A semen analysis will also be requested following a vasectomy, as it is the only way a man can be completely certain that he is sterile after this procedure.

How do I produce a specimen for a semen analysis?

- You will be given a specimen pot. Produce semen by masturbation into the pot. Do not use semen from a condom.
- Your doctor may ask you not to have sex for a certain amount of time before you produce the sample. Usually this means you
 should not have had sex for at least 48 hours beforehand. The length of time you are asked to abstain from having sex may
 vary your hospital should give you information on this. However, no more than seven days should have gone by since last
 having sex.
- Ideally, you should deliver the sample to the laboratory within one hour of production. Usually the laboratory will want to know in advance of when you are going to arrive.
- The pot which contains the sample should not be left out in the cold but should be kept warm for example, in a jacket pocket.
- If you live more than half an hour or so away from the laboratory, your clinic may be able to offer you a suitable private room where you can produce your sample.

What is a normal result?

The amount of semen is measured. There is usually between 1.5-4 mls. The sample is then looked at with a microscope in order to:

- Count the number of sperm.
- Look at the shape of sperm.
- Determine the percentage that are actively moving (motile).

The results can help detect whether there are any problems with the sperm likely to cause difficulties for a couple trying to get pregnant (infertility). Home testing kits are available but they only measure the number of sperm present. They do not measure any of the other factors and can miss common causes of male infertility.

The results of the test generally fall into one of three categories:

- Normal.
- Definitely abnormal. This may mean that:
 - There are very few sperm (oligospermia) or no sperm (azoospermia).
 - The shape and size of sperm (this is referred to as sperm 'morphology') are not normal (teratozoospermia).
 - Very few of the sperm are moving normally (asthenozoospermia).
 - It is not unusual for an abnormal result to be due to a combination of the above.
- Somewhere 'in between'. The more normal sperm there are and the higher the percentage that are actively moving, the greater the chance of fertility.

If the test results show that the specimen was not normal, you may be asked to repeat the process. This is because sperm production can vary due to a number of different factors. If a semen analysis does need to be repeated, it is usual to wait for three months. This is because it takes three months for a new cycle of sperm to be made.

Sometimes, if the sperm count is only mildly abnormal, some of the following factors may be worth considering:

- Was the sample ideal? See above on how to produce an ideal sample. It may be worth repeating to check this. 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 temperature of testicles (testes). Sperm are made in the testes, which are in the scrotum. This is the body's way of keeping the testes slightly cooler than the rest of the body, which is best for making sperm. 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. It is not clear whether these measures improve a man's fertility.
- Smoking can affect the sperm count. If you smoke, you should stop completely for optimum sperm production.
- Alcohol. More than fourteen units per week (equivalent to about seven pints of normal-strength beer or fourteen small glasses of wine) may interfere with optimum fertility.
- Obesity. Men who have a body mass index (BMI) of 30 or more are likely to have reduced fertility. Losing weight may help.
- **Medicines and drugs**. Most do not interfere with sperm production but some may do. These include: sulfasalazine, nitrofurantoin, tetracyclines, cimetidine, colchicine, allopurinol, some chemotherapy medicines, cannabis, cocaine and anabolic steroids. If you have a low sperm count, tell a doctor if you take any medicines or drugs regularly.

Further reading & references

- Fertility Assessment and treatment for people with fertility problems; NICE Guidance (February 2013, updated September 2017)
- Guidelines on Male Infertility, European Association of Urology (Limited update 2016)
- Fertility Problems; NICE Quality Standards, October 2014
- Lamb DJ; Semen analysis in 21st century medicine: the need for sperm function testing. Asian J Androl. 2010 Jan;12(1):64-70. doi: 10.1038/aja.2009.4.

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