



# The role of the male partner in subfertility

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**A full sexual history and examination of a semen sample are the first steps in assessing a couple's ability to conceive.**

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**W**e have all heard the saying 'it takes two to tango', but nowhere is it more relevant than in the accomplishment of conception. The first requirement for conception is that a sufficient number of fertile sperm are deposited in the correct place at the right time. It is therefore important that the man's role in conception is assessed at the start of investigations for infertility, because it is inconvenient to find that the man is azoospermic after many months of unsuccessfully investigating and treating his female partner.

## **TAKING A FULL SEXUAL HISTORY**

As for all medical consultations, a full patient history should be taken. Although discussing a couple's sexual history is potentially embarrassing, it should be tackled in a nonchalant, matter of fact manner. I usually begin by asking the couple how often they have intercourse. Most couples say they have sex two to three times a week; however, there is the occasional couple who report that they have a lower frequency of intercourse. Timing of sexual intercourse is then tantamount, and I find that using a temperature chart prospectively and also recording the days on which intercourse occurs is a very useful monitor.

It needs to then be ascertained that penetration is adequate,

and I use four questions to confirm this:

1. I ask the man if he is getting adequate erections
2. I ask the woman if she believes that penetration is adequate
3. I then confirm that the man believes that he ejaculates
4. Finally, I ask the woman if she can feel semen in the vagina.

If all the questions are answered with yes, it can be concluded that semen is deposited in the correct place. If there is any doubt about the adequacy of intercourse, the laboratory examination of postcoital cervical mucus – the Sims-Huhner or PostCoital Test – can be undertaken.<sup>1</sup>

### EXAMINATION OF SEMEN

We then need to move to the examination of the semen. This is undertaken by a semen analysis, which should be carried out in an experienced laboratory. The semen collection should be preceded by two to three days of abstinence, and the specimen should be collected by masturbation, not interrupted intercourse. Interrupted intercourse may result in loss of some of the semen and/or contamination of the specimen by vaginal acid, which deleteriously effects sperm motility. If a man is unable to masturbate to produce a sample, a semen collection device during intercourse may be used. These are available from specialised

andrology laboratories and are made from a material that is not toxic to sperm.

The semen specimen should be delivered to the laboratory within one hour of collection, where it should be analysed without delay.<sup>2</sup> The first assessment is of its macroscopic appearance and volume. A normal volume of semen is 2 to 5 mL. The semen is then liquefied by rotation on a slow spinning wheel, and the sperm concentration is then calculated. This is usually done by examination under a microscope using a haemocytometer, where after appropriate dilution the sperm are counted within grid squares.

Computer-assisted semen analysis has also been developed; video images are assessed using a computer program, but the accuracy is affected by the inability to differentiate sperm from other objects that are similar in size to spermatozoa, such as round cells.

Next, the percentage of motile sperm is assessed under the microscope, as well as the degree of motility, which can be assessed in different ways, either using a motility index or percentage of progressive motility. If the motility is less than 25 to 40%, sperm viability testing using supravital staining is recommended. This is important before *in vitro* fertilisation

**TABLE. WORLD HEALTH ORGANIZATION NORMAL RANGES FOR SEMEN ANALYSIS\***

Parameter	Normal range
Volume	>1.5 mL
Sperm concentration	>15 million per mL
Sperm motility	>40%
Normal sperm morphology (strict)	>4%

\* Based on fifth percentile of values from a group of recent fathers whose partners became pregnant within 12 months of stopping contraception.

(IVF) is attempted because dead sperm cannot be used for IVF, whereas immotile but living sperm are suitable.

The morphological features of the spermatozoa then need to be assessed on a fixed-stained specimen (Table).

Finally, if semen examination is being carried out in an andrology laboratory, testing for the presence of antisperm antibodies coating the spermatozoa can also be carried out. This is performed on a fresh specimen using immunobeads coated in antigen. The presence of significant levels of antisperm antibodies (on more than 40% of spermatozoa) suggests immunological subfertility.

## OTHER FACTORS TO CONSIDER

If the semen parameters are normal then other factors should be considered. Appropriate advice should be given about the timing of sexual intercourse. I recommend that a temperature chart (see [www.fertilityfriend.com](http://www.fertilityfriend.com) for an example) should be used, and days of intercourse plotted. However, this places significant stress on the male partner to produce 'on demand' and sometimes results in significant anxiety, with some men finding they have difficulty performing. I use strategy to try and minimise performance anxiety. First, I give general advice on the best days to have intercourse, without picking a specific day. Second, I suggest that the couple should try and have intercourse about every second day in the estimated fertile phase, rather than specifying one particular day.

If there are subnormal semen parameters, full assessment of the man or review by an andrologist should be considered.<sup>3,4</sup> In the meantime, the couple should be advised to continue trying to conceive, because even men with severe semen abnormalities have been known to produce pregnancies.

There is an ever continuing but slower conception rate and a declining proportion of couples are falling pregnant as sperm density falls and the monthly chance of pregnancy falls progressively as time passes. Nonetheless, a considerable proportion of couples in which the man has less than 5 million sperm per mL achieve a pregnancy over several years.<sup>5</sup>

It is beyond the scope of this article to discuss possible treatments of male infertility, but suffice to say that IVF or intracytoplasmic sperm injection (ICSI) are most likely to be of help. For further information on these techniques, refer to 'The role of the GP in managing male infertility' in the October 2010 edition of *Medicine Today*.<sup>4</sup>

The intervention of IVF procedures again places pressure on the male partner. The instructions here are very precise; he has to produce a semen sample on a specific day at a specific time, usually while his wife is undergoing surgery. Although some IVF units allow a sample to be produced at home with rapid delivery to the clinic, others insist on producing on site, in rooms with varying degrees of ambiance. Some provide pornographic DVDs in comfortable rooms (known as masturbatoriums) to help raise the libido, whereas others have spartan facilities that do little to raise desire and nothing to help performance. If difficulty with sperm production is experienced, sperm can be collected in advance, cryostored, and then thawed and used when required.

As well as providing a sperm sample, it is also the male partner's role to provide support for his partner through the IVF process. This not only involves emotional support but he can also participate by administering the injections, accompanying her to appointments and helping her with her daily activities during these emotional days.

## CONCLUSION

In a couple with suspected infertility, the man should also be assessed. Semen samples should be examined to determine the mobility and numbers of sperm present. If the sample is adequate, timing of intercourse and performance anxiety should be addressed. IVF is a possibility for couples unable to conceive naturally.

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## REFERENCES

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COMPETING INTERESTS: Professor Kovacs has received honoraria for lectures from Merck Sharp & Dohme and Bayer-Schering.