Interpretation of semen analysis results – a view from the reversal perspective.

Introduction. Pregnancy occurs of course as the result of a sperm making the massive journey up to the Fallopian tube, making contact with and penetrating the wall of the egg (ovum). So, conception bears some resemblance to winning on the lottery. The more pounds you invest the better are the chances of winning a fortune and the greater the number of sperms that can be produced with the biggest proportion of vigorously swimmers the more likely you are to get pregnant.

Sperm count reports.

These vary in complexity but usually show the following headings

Number of days abstinence (from sex!) 3 days is the standard, fewer than 3 reduces the count (sometimes dramatically).

Volume of ejaculate. Normal is 2-7 mls but usually we see around 2-4 mls. Volume is important because a large volume increases the total number of sperms being delivered but small reported volumes are sometimes misleading as spillage during collection is common!

Time of production and examination under the microscope. Standard is no more than 60 minutes between production and examination although some labs say 120 minutes. The longer the interval the less vigorous the sperms are at swimming. Watch out for long delays with the sample sitting around in the lab. before analysis.

Appearance, viscosity pH and agglutination can be ignored. These results give an indication of the contribution to the ejaculate from the prostate and seminal vesicles and very rarely are abnormal.

Motility. It is normal to have up to 50% of sperms dead. 25% of the total count of sperms or more should be showing signs of making 'rapid forward progression' and the remaining 25% may show signs of les vigorous swimming or twitching.
Motility is sometimes expressed as
Grade **A** making rapid forward progress
B Slow progess
C Twitching
D Dead.

Sperm concentration. The number of sperms per ml. Normal is given as 20-150 million per ml or 10 to the power of 6.

Antisperm antibodies. Sometimes referred to as the MAR test, often as just antisperm antibodies. I recommend that you ignore this test result. See later under post reversal interpretation.

Morphology / % abnormal forms. This refers to the shape of the sperms and the variation from what is regarded as normal configuration. Up to 85% abnormal forms is regarded as normal.

Assessing your result

Returning to the theme in the introduction, your chances of conception depend on how many active sperms are in the ejaculate ie

Concentration x volume x % motility = total no. of fertile sperms

The lower limit of normal is regarded as 20/ml x 2 ml x 50% = 20 million.

Where the lab report merely overall numbers of sperms with any degree of motility, 50%+ is normal.

Where the lab. reports grades of motility, use the grade A motility figure and regard 25% or more as normal

ie 20m/ml x 2 ml x 25% = 10 million rapidly progressive sperms

For example 50million sperms per ml x 2.0 ml volume of ejaculate of which 25% actively motile gives a total number of motile sperms per ejaculate of 25 million (where the lower limit of normal is 10 million).

Sperm counts after vasectomy reversal.

Vasectomy reversal creates an exit path for sperms that have been trapped for years. There is therefore a massive backlog of sperm fragments and debris to be shifted before fresh sperms (which take 2 months to be generated) can come through.

We use the initial test at 6-8 weeks to confirm that our connection is open and functioning. We would usually see relatively small numbers of sperms, the vast majority of which are dead (eg. 5 million with an overall motility of as little as 3%). With the next test at 4 months we would expect to see a rapid increase both in terms of numbers and motility eg 20 million with 25% overall motility and a final return to normal levels after a further few months.

Regular intercourse, using the Zinc and Selenium supplements, wearing loose underwear and leading a healthy lifestyle ensures you are doing your best towards a rapid return to fertility.

It is possible to reach very high counts very quickly after reversal but this is the exception rather than the rule. If this happens to you, congratulations, you will probably improve then stabilise. Early pregnancy, with the partner's next cycle, does occur but is rare.

Some do's and don'ts

- **Do remember that you can approach a private laboratory if you have any difficulty on obtaining tests through your GP/**
- **Do make sure the test is after 3 days abstinence form sex (tell us of the interval)**
- **Do note on the lab form the date and time of production**
- **Don't be disappointed if your first test shows a low count (early low is normal)**
- **Do have sex on a regular basis (4 days a week) rather than focussing on mid cycle**
- **Do take the Zinc and Selenium supplements recommended**
- **Do have follow up tests, ideally every 2 months**
- **Don't be surprised or worried to see positive antibody test results**
- **Do let us have a copy of the test report for interpretation and our records**
- **Do remember that there is great variation between one test and another. Follow up tests are needed to confirm a trend.**

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