

Diagnostic Semen Analysis Information for Patients

Wales Fertility Institute has two Andrology laboratories, one located in the University Hospital of Wales, Cardiff and the other in Singleton Hospital, Swansea. Both laboratories provide diagnostic semen analysis (fertility assessment), post-vasectomy semen analysis and assessment of urine for suspected retrograde ejaculation.

The service is has ISO 15189 accreditation. The service is provided on the NHS to patients in the Cardiff and Vale and Swansea Bay University Health Boards and to self-funding patients. In addition, the laboratory in Cardiff offers sperm cryopreservation. We are the only Unit in South Wales to provide NHS funded sperm cryopreservation for both oncology and transgender patients. We can also provide self-funded sperm storage prior to surgery for vasectomy and social storage for fertility preservation.

Diagnostic Semen Analysis

Approximately 1 in 7 couples have difficulty in conceiving and up to 30% of these cases may be due to a sperm problem. Sperm problems can range from the complete absence of sperm to having low numbers or poor sperm quality. Currently, the only reliable method we have for detecting these is semen analysis. Semen analysis is the microscopic examination of the semen to see how many sperms there are and whether they function correctly. The result of the semen analysis test will indicate whether a male factor is involved and so aid decisions about appropriate treatment.

The causes of male infertility may be genetic (inherited) although the following are known risk factors:

- Previous testicular injury or disturbance e.g. torsion
- Previous testicular surgery e.g. undescended testicle
- Previous disease/surgery
- Drugs causing hormonal imbalance especially anabolic steroids as well as chemotherapy,
- Very hot and long baths (as opposed to showers)
- Spinal injury
- Urinary Tract Infections
- Antibiotics can unbalance microflora and effect seminal quality

In addition, febrile illness such as flu or glandular fever can cause temporary disruption of sperm production, which may not become apparent until 2-3 months later.

Some men may produce sperm but may have a functional problem such as a blockage, which prevents the sperm from reaching the ejaculate.

When we assess your sample, we look at many factors that give an indication of your sperms fertility potential:

- **General appearance.**
- **Volume** - determined by weight, as it is the most accurate way of measuring viscous liquids. WFI provide the correct pre-weighed, non-toxic containers for sample collection.
- **pH** - an indicator of the age of the sample and can indicate Urinary Tract Infections.
- **Motility** - how well your sperm swim.
- **Concentration** - the number of sperm present in your sample.
- **Morphology** - an assessment of the overall shape of the sperm.
- **Anti-sperm antibodies** - these may be present in your sample and can affect motility.
- **Vitality** - the numbers of live sperm, only used if >60% are non-motile.

Post-vasectomy Semen Analysis

Vasectomies are a very successful method of contraception and have a low failure rate. A post-vasectomy semen analysis ensures that your operation has been successful. Your follow up analysis must be at least 16 weeks after your surgery, and you should have had a minimum of 20 ejaculations within this period (approx. 2/week). Some patients may require further analysis and should this be required you will be instructed how to do this.

Please note it is the responsibility of the doctor to provide feedback on the results of your post vasectomy analysis. The laboratory is unable to assist with this.

Making an appointment

Appointments are available Monday to Friday in both Cardiff and Singleton.

All analyses, including fertility, post-vasectomy and retrograde, must be booked in advance using the SBU Andrology on-line booking system. This can be accessed by scanning the QR code provided on the back of the Request Form, which is obtained from the clinician who has requested the analysis. There are 4 appointment options available:

- Drop off ONLY Cardiff
- Drop off ONLY Singleton
- Production Room Cardiff
- Production Room Singleton

‘Drop off only’ should be selected where patients are able to produce their sample off-site and deliver to the laboratory within 50 minutes of production. ‘Production Room’ should be selected if the patient is unable to deliver the sample to the laboratory within 50 minutes. ‘Production room’ should be selected for all Retrograde analysis appointments.

Select a date from the on-screen calendar provided. Appointments are bookable up to 6 weeks in advance. Once a date has been selected, available time slots will appear. Select the time slot of choice. Complete all the details in the boxes provided. To receive text reminders, remove the first digit from your phone number.

Select the test required from the dropdown box provided - Fertility, Post Vasectomy or Retrograde Urine. Enter details and book. Once an appointment has been booked, a text and confirmation email will be sent stating the date and time of booking, directions to the laboratory and a contact telephone number. If you have booked a Retrograde Semen Analysis please contact the Andrology team for further information about producing your sample.

Providing your sample

Before producing your sample, you must:

- Abstain from intercourse or ejaculations for a minimum of 48 hours and a maximum of 7 days.
- You must also be hygienic, washing your hands and genital area with soap and water, ensure complete removal of all soap residues and dry thoroughly.
- For post-vasectomy samples, the first sample must be at least 16 weeks after the operation and ideally after a minimum of 20 ejaculations.
- Samples should be produced by masturbation into the container provided. Withdrawal (coitus interrupts) is not recommended because it is too easy to lose part of the sample making the test useless. Do not use lubricants such as K-Y jelly. Condoms should not be used because they contain spermicide that kills the sperm.
- If you are unable to produce sample through masturbation, we can provide non-spermicidal condoms on request. Patients wishing to use these condoms must be aware they are not CE marked and therefore we cannot guarantee the sample quality will not be compromised.

Producing the sample:

- Use only the container provided – other containers are not acceptable as they may kill sperm.
- Ensure that the whole sample is collected. If you fail to collect the whole sample, you must inform the Andrologist as this could result in the incorrect interpretation of your results. This will normally mean repeating your test.
- Make sure that the screw cap is firmly attached (after producing the sample into it) before placing it in the plastic bag provided.
- Please ensure that your full name and date of birth are written on the container.
- The request form **must** have the name and location of the requesting doctor, without this they will not receive the report, and your full name, date of birth and address.
- Keep the sample close to the body whilst travelling (as sperm are sensitive to extremes of temperature). Do not place it in the outside pocket of a jacket, a bag or near the heater outlet in the car.
- Never use a public toilet and public space e.g. car park to produce your sample in; you may potentially be engaging in illegal activity.

Delivery of the sample

- Deliver the sample and completed form to the Andrology Laboratory **within one hour** of collection.

- Ensure you arrive no later than your scheduled appointment time. Failure to arrive at your allocated appointment time may result in your sample being rejected. Please note, at a certain times of the day, traffic and parking restriction may result in it taking longer than you expect to arrive at the laboratory. Please take this into consideration when planning your journey.
- When delivering the sample to the Unit, please refrain from any strong-smelling perfume or aftershave, as this may potentially damage any embryos or gametes in the Unit.
- The Andrology laboratory, WFI Cardiff is on the C1 Link Corridor. A map of the hospital can be found on the [UHW webpages](#). C block, 1st floor opposite the lifts
- The Andrology Laboratory, WFI Swansea is on Level 3, Women and Children's Health Block, Singleton Hospital. A map of the Hospital can be found on the [ABMU webpages](#). The Andrology Laboratory in Singleton Hospital is located in the Women and Children's Health Block, Level 3, next to Ward 17.
- When you arrive at the laboratory, you will be met at the door and invited onto the unit, where we will confirm your ID and information provided on the request form.
- If you have booked a room to produce your sample, you will be taken to one of our private sample production rooms..
- It is important that you answer any questions from the Andrologist fully and honestly, you will be asked to sign the form to confirm this information is correct. This information is used to ensure that your results are interpreted correctly.
- Failure to follow the collection guidance can alter semen analysis results. If you have not followed the recommendations exactly please inform the laboratory

Results

Results of the test will be sent directly back to the requesting doctor. Please allow 7 - 10 working days for these to reach your doctor. **The laboratory cannot give results directly to patients.**

You may be requested to provide a second sample, the most common reasons for this are failure collect the whole sample, excessive delay in transporting the sample to the laboratory or not complying with the required abstinence period. The laboratory will always recommend that a second sample is assessed if no sperm are detected in the first sample. In addition it is not always possible to obtain sufficient information from a single sample and therefore an additional sample may be requested.

In line with the progressive service that we are offering the laboratory now operates the "SAMI" Computer Assisted Semen Analysis (CASA) from Pro Creative Diagnostics. This semi-automated system uses digital imaging and computer software to provide assessments of sperm concentration and motility; in addition the system is able to provide average progressive velocity for the sperm.

The CASA enables fast, accurate and reproducible semen analysis.

Assurance of quality

The Andrology laboratory is accredited by UKAS to ISO 15189:2012.

As part of the quality processes, the laboratory has determined the uncertainty of measurement for the assessment of semen parameters. All members of Andrology staff have been trained and have annual competency assessments. In addition they are required to participate in the ESHRE external quality assurance distributions as well as the laboratories own internal quality control.