

# Palm Beach Obstetrics & Gynecology, PA

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## INSTRUCTIONS FOR INFERTILITY WORKUP

Please read these handouts carefully. They explain all the tests necessary for a complete infertility evaluation. We can usually complete the evaluation in one month. At the end, we should have found a reason why you have not been able to conceive. In the majority of cases, we can diagnose the problem and start treatment right away. We understand that an infertility evaluation is very stressful and time consuming, but in the end, it will be worth it. Most couples are able to get pregnant eventually.

The following is a timetable of the tests that we need to get. Timing is crucial for all of these tests. Record the first day of your period, and call us to schedule the appropriate tests :

- Day 1                      Call to make arrangements for the HSG.
- Day 7- 12                HSG done. Remember to take 3 Advil before the procedure. Start to take antibiotics if they were prescribed.
- Day 12-13-14...        Start testing urine with Ovuquik or other ovulation prediction kit.
- Ovulation day-         Call our office to schedule the Post Coital test. Read instructions carefully!
- Day 25                    Progesterone level if indicated.

The Semen Analysis test is one of the most important parts of the evaluation. It can be obtained at any time.

If the Ovuquick shows that you *did not* ovulate, call us for another appointment. There are several reasons why the urine test may be negative even though you are ovulating. Sometimes the timing of the test is incorrect. Other times, we must do serial ultrasounds to accurately find the period during which ovulation takes place. We will discuss medications to promote ovulation. Once we get you to ovulate, we can continue with the workup. Completing all the tests is still important, since in some cases, there are several reasons for infertility.

Infertility is not considered a covered service under some insurance carriers, so some of the tests may not be covered by your plan. However, most of the tests are reasonable in cost. Please call your insurance carrier or my office for more information.

I strongly recommend that you keep a diary. In this diary record the days of your period, the day you ovulate and when you have intercourse. This information is very helpful to us in determining the reason why you are not getting pregnant.

## THE SEMEN ANALYSIS

### DEFINITION

The semen analysis is a test which looks at how many sperm a man has in his ejaculate. In addition, it also provides information on how well the sperm can swim (motility) and whether sperm are normal in size and shape (morphology).

### INDICATIONS

Abnormal sperm count or function is a significant factor in 20-30% of infertile couples. A semen analysis is a simple and very inexpensive test for male factor infertility.

Normally, new sperm develop continuously within the testes. A single sperm cell will mature over 3 months time. Sperm production is under the influence of many factors including : Hormones from the brain, testosterone, and temperature changes. Sperm production is sensitive to many influences including illness and fever. In these circumstances, the count may drop temporarily and return to normal approximately three months afterwards.

### METHOD OF COLLECTION

The best way to collect sperm for a semen analysis is by masturbation. Since this is embarrassing for most men, we encourage that the collection be done at home, as long as the specimen can reach the laboratory *within 1 hour after collection*. A sterile container can be provided. Soaps or lubricants should not be used, since these can kill the sperm and create a false result. Most of the sperm are present in the first drop or two of the ejaculate, so be careful to obtain all the fluid.

1. Obtain the specimen cup from our office.
2. Abstain from ejaculating for at least 2 days before the test. Prolonged abstention (more than 4-7 days) can adversely affect the semen analysis.
3. Bring the specimen to the laboratory within 1 hour of collection.

### RESULTS

A semen analysis from the same individual can change from day to day and from month to month. Usually, a normal semen analysis will stay within the "normal" range. In most laboratories, the "normal range" is :

Volume:	1.5-5 ml.
Sperm count:	20 million or more sperm per ml A total of at least 60 million sperm.
Motility:	50% or more of the sperm moving.
Progressive motion:	Sperm moving in one direction.

### CAUSES OF AN ABNORMAL SEMEN ANALYSIS

Many factors can interfere with sperm production or function. The problem is usually in the area of the testicles where sperm are produced (testicular tubules). A low sperm count can be due to congenital anomalies, infections, blockage of the ducts that transport the sperm to the outside, allergic reactions, and certain medications or street drugs. Sometimes, the cause for a low sperm count or inadequate sperm cannot be identified.

### COMMON MYTHS

Infrequent or very frequent ejaculation may affect sperm count or motility, but not enough to cause infertility. We ask that you abstain from intercourse for 1 to 2 days before providing your semen for analysis, so that we can compare the results with standard charts.

A low sperm count or low sperm motility does not automatically mean that you will be unable to get pregnant. Likewise, a normal-appearing semen analysis does not mean the sperm are necessarily functioning normally. There are many factors that we do not yet understand about sperm function.

## INTERPRETATION

The interpretation of the semen analysis results requires the consideration of many different factors. If the results are abnormal, we will refer you to a Urologist. Oftentimes, therapy is successful in restoring a normal sperm count.

## THE HYSTEROSALPINGOGRAM (HSG)

### DEFINITION

The HSG is an X-ray procedure which evaluates the cavity of the uterus, the cervical canal and the fallopian tubes.

### INDICATIONS

The HSG is a useful procedure for women with infertility, recurrent miscarriages, unexplained uterine bleeding, and possible genital malformations.

### PROCEDURE

The HSG is performed by the x-ray department. The procedure takes about 15-20 minutes to complete, and you can usually drive yourself back to work or back home afterwards. *The HSG is associated with cramping, but this symptom can be minimized by taking 600 mg of Advil or Motrin 1 hour before the procedure.*

You will receive a pelvic exam. A small plastic tube is placed into the cervical opening at the top of the vagina. Iodine dye is then gently injected into the uterus, and several x-ray pictures are taken. Sometimes it is necessary to change instruments to get a better look at the uterus and tubes.

### ABNORMALITIES

With the HSG we can diagnose occluded (blocked) fallopian tubes, uterine polyps (benign pieces of tissue inside the uterus), fibroids (muscle tumors growing in the wall of the uterus), bicornuate uterus (a uterus with two cavities), and scarring inside the cavity of the uterus (Asherman's syndrome).

### LIMITATIONS

1. The HSG cannot make the diagnosis of endometriosis.
2. Although the HSG can sometimes suggest the presence of an ovarian cyst or pelvic scar tissue, the diagnosis of these problems usually requires an ultrasound or a laparoscopy.
3. The diagnosis of blocked fallopian tubes on HSG may be wrong. The tubes can be temporarily blocked with mucus or tissue from the uterine wall. The tube can also go into spasm and squeeze off the flow of the dye. A repeat HSG or a laparoscopy may be necessary for confirmation.

### RISKS

As with any other minor surgical procedure, the HSG can occasionally cause bleeding, infection or perforation of the uterus. Rarely, a woman will have an allergic reaction to the iodine. Let us know if you have had a previous allergic reaction to iodine or other x-ray fluids. When an infection is suspected, we will give you antibiotics to decrease the risk of the procedure.

### ADVANTAGES

The HSG is an excellent technique to evaluate abnormalities of the uterus and tubes. The procedure has a very low risk and gives us a lot of information. In addition, it seems to increase a couple's chances of conceiving for about 3 months afterwards.

### TO SCHEDULE AN HSG

Call us the first day of your period. It is best to perform the test between 7 and 12 days after your period starts. Please feel free to call us if you have any questions or problems regarding this procedure.

### FOLLOWING AN HSG

You may feel some cramping for a few hours after the exam. If the cramping persists, try Advil or Motrin. Your Doctor may prescribe an antibiotic like Ampicillin or Vibramycin to take for a few days *after* the X-Ray to prevent any infection from developing. If pain or fever occur, contact the Doctor's office immediately.

## OVULATION TIMING

### BACKGROUND

In the past, the only way to monitor ovulation was to measure your Body Temperature with a thermometer every morning and wait for an elevation. This method was crude, unreliable and difficult to comply with. However, it can still work for some couples. Other signs of ovulation, such as examining cervical mucus, are very unreliable. Of all the methods available today for estimating the time of ovulation, the simplest and most reliable is the measurement of the hormone LH (Luteinizing Hormone) in the urine. LH is a hormone released by the pituitary gland in the brain. Ovulation (The release of the egg from the ovary) usually occurs 12 to 24 hours after LH is found in the urine.

### METHOD

Although many urine detection kits are now available in Drug Stores, the most accurate and user friendly is the Ovuquick. The advantage of the Ovuquick is a clear cut color change, an advantage lacking in most over-the-counter products. The Ovuquick has the additional advantage of a short performance time (4 minutes). However, if you find another product that works well for you, by all means use it instead.

### TIMING

For women with fairly regular cycles, the Ovuquick can be started two days prior to expected ovulation. Most women ovulate 12 to 16 days after the first day of their period.

For example, a woman with a 28 day cycle can start Ovuquick testing on the evening of cycle day 12.

For a woman with irregular cycles, Ovuquick testing should begin early enough to avoid missing ovulation. The best rule of thumb is to begin testing two days before ovulation in the shortest recent cycle. Just calculate the day your next period is due, and start testing your urine 16 days before that day.

For example, a woman with a 26 day cycle should start the Ovuquick in cycle day 10, two days before the expected ovulation for a 26 day cycle.

### PROCEDURE

The urine LH test described above is most accurate when urine is measured in the late afternoon or early evening. For women with questionable LH surges and ovulatory abnormalities, the urine test may be tested twice daily during a monitoring cycle to increase efficiency.

### USES OF LH TESTING

Urine LH measurement can be used in a variety of clinical situations :

- Timing of intercourse.

- Timing of postcoital test.
- Timing of evaluation of the postovulatory phase (Luteal phase). We will need to obtain a Progesterone blood level or an endometrial biopsy approximately 10 days after ovulation.
- Timing of artificial insemination with husband or donor sperm if necessary.

#### PITFALLS OF URINE LH TESTING

There may be a number of reasons why the urine LH test may be inaccurate or misleading:

1. Clomifene (Clomid, Serofene) treatment - The drug Clomifene stimulates the Pituitary gland in the brain to release LH, which in turn, stimulates ovulation. Measuring your urine with Ovuquick too soon after the last Clomifene tablet may show a false positive elevation.
2. No ovulation - The Ovuquick may not change at all during an abnormal cycle in which ovulation does not occur (anovulatory cycle). In this case, the absence of a color change indicates a problem with ovulation. This information is very important, since we then know that you need further treatment with Clomifene or Pergonal. We can then increase the dosage of medication to induce ovulation.
3. Pregnancy - If you are pregnant, the urine LH may be falsely positive. A positive Ovuquick test for three or more consecutive days is indicative either of a problem with the kit, or the establishment of a pregnancy.
4. Repeatedly positive test - In rare cases, a test may be defective and give a positive test every time the urine is checked. In most cases, urine LH remains elevated for only two days.

#### WHEN THE TEST IS POSITIVE

A number of procedures are scheduled based on the day of the LH rise. Since ovulation occurs in most cases within 12-24 hours after a urine LH change, Ovuquick can be used to precisely time postcoital tests, artificial inseminations, and obviously, intercourse.

*If the Ovuquick changes between Sunday evening or Thursday evening, call the office after 9:00 AM to make an appointment for that same morning (Please refer to the handout for Postcoital Test).*

*If the Ovuquick changes Friday or Saturday evening, please call us Monday morning at 9:00 AM for an immediate office appointment.*

## THE POSTCOITAL TEST (PCT)

#### DEFINITION

The postcoital test (PCT) is a procedure which analyses how many sperm are in the cervical mucus after intercourse, and examines how well the sperm are swimming.

#### PHYSIOLOGY

In order for a pregnancy to occur, an adequate number of functioning sperm must be able to traverse the cervix and uterine cavity, and find the egg traveling inside the fallopian tube. The cervical mucus is extremely important in this process. Normal mucus acts as a channel (To guide the sperm in the right direction) and a reservoir (to preserve the sperm living for hours or even days). Inadequate mucus (infected or too thick) acts as a barrier and inhibits sperm transport.

Cervical mucus is stimulated by estrogen, and estrogen levels rise as ovulation approaches. Good cervical mucus is abundant, thin and watery (low viscosity).

The PCT is useful in assessing mucus quality and sperm transport. However, the test is not perfect and should not be over-interpreted. Many pregnancies occur in women who never have "normal" PCT's.

#### PROCEDURE

*Timing:* Proper timing is critical, since cervical mucus is usually thick a few days before and a few days after ovulation. Some women can identify when the cervical mucus is best by evaluating its amount and its viscosity. The Basal Body Temperature (BBT) Chart and the Ovuquick can assist in the timing of the PCT (See handout on ovulation timing).

*Coitus:* Intercourse can be the night before the test, but results are more reliable if it is done the morning of the test.

*Technique:* The PCT involves a pelvic exam and is a painless procedure. Cervical mucus is drawn into a small plastic tube and examined under the microscope.

#### INTERPRETATION

In a normal PCT, at least 5 sperm are seen swimming under the microscope. We also look at the viscosity and clarity of the cervical mucous to determine if the sperm can swim through it to reach the egg.

#### COMMON QUESTIONS:

Q: How common is cervical factor infertility?

A: A true case of cervical factor infertility is relatively rare, representing only 5% of infertile couples. Abnormal cervical mucus is most frequently seen in women who are receiving clomiphene therapy, or who have undergone previous surgery of the cervix. The most common cause of an abnormal PCT is either incorrect timing of ovulation, or inadequate sperm counts.

Q: What is the best treatment for poor cervical mucus?

A: The result of the PCT will determine the best therapy. If an infection is present, cultures and antibiotics are needed. Inadequate mucus may require estrogen, Pergonal, intrauterine insemination, In Vitro Fertilization, or other specialized procedures.

Q: How do you schedule a PCT?

A: Timing is the key to a successful PCT. You should be checking for ovulation by using the Ovuquick kits, Body Temperature Charts or other over-the-counter ovulation prediction tests. When you find out that you are ovulating, call our office to schedule the PCT for the following day. If you ovulate on Friday or Saturday, we can still do the PCT on Monday.

If you have any other questions about this procedure, please do not hesitate to call our office.