Your First Visit and Initial Evaluation

1. Who should be evaluated for infertility?

Infertility is defined as the inability to conceive after one year of attempting to achieve pregnancy. For women over 35, some recommend that this time period be abbreviated to six months, and for women over 40, three months. Among fertile couples, the chance of conception is 20-25% per cycle (month). About one out of every six couples has problems conceiving.

The causes of infertility are mainly male in about 30-40% of couples, mainly female in another 40%, and mixed in 5-15% of couples. In 15% of cases, a definite cause cannot be identified, although effective treatment exists, even for those with "unexplained" infertility.

2. What tests are usually ordered at the time of the first visit?

Initial testing depends on your history and which prior investigations have been undertaken. Nevertheless, there are certain tests that are frequently ordered, and these will be discussed here.

A word on testing: it should always be remembered that no test is 100% accurate; tests may be falsely negative or positive. Some tests may be repeated to confirm unexpected results.

3. What testing is done in the male partner?

The initial male evaluation consists of a semen analysis. A semen sample is microscopically examined in the laboratory, and a sperm count is performed. Although the semen analysis is often ordered at the time of the first visit, the sperm sample is usually collected later.

Ideally, the sperm sample is collected after 2 or 3 days of abstinence from sexual activity. The specimen is usually produced by masturbation. If you live more than 30 or 40 minutes from the laboratory (the lab is next-door to our Knightsbridge office), then the specimen should be collected at the lab. Otherwise, you can collect the specimen at home using one of the special containers provided by us. During transport of the specimen, please avoid exposing it to extremes of heat or cold (put the specimen container into a pocket on the inside of your coat, for example). If you live far from Columbus, then a semen analysis can often be performed at a facility near your home.

Sperm counts can be extremely variable from one occasion to another. If your count is low, then it may be repeated in 2-4 weeks.

4. What hormonal tests might be done in the female partner?

Almost all of these tests are simple blood tests. A **TSH** (thyroid stimulating hormone) assay may be done to check for normal thyroid function. Abnormal thyroid function can interfere with ovulation. Likewise, a **PRL** (prolactin) test can be obtained. PRL is made by your pituitary, a small gland at the base of your brain. Elevated PRL levels are associated with ovulatory problems.

In some women, **testosterone** (a male type hormone made to some extent by the ovaries) and **DH(E)AS** (dehydroepiandrosterone sulfate, another male type hormone made by a woman's adrenal glands) may be ordered. Elevations of these hormones can also interfere with ovulation.

An **FSH** (follicle stimulating hormone) test may be obtained to assess how well your ovaries function. This test should be obtained on cycle day 3 ± 1, with day one being the first day on which continuous menstrual bleeding (not spotting) is noted. In cases where the calculated day of obtaining the FSH test happens to be a Sunday or holiday, the test can be done on the previous or subsequent day.

A **progesterone** determination may be ordered to assess whether you are ovulating. While this test, if normal, makes it likely that ovulation has occurred, it cannot actually *prove* that you ovulated.

For the progesterone test, a blood sample is usually obtained 7 ± 2 days after the probable date of ovulation. In women with 28-day cycles, this would usually be on cycle day 21. In women with longer or shorter cycles, the best time for the progesterone test is generally 7 days before the anticipated onset of the next period.

The progesterone test can also be timed to be done 5 to 7 days after the increase in "basal body temperature," or 7 to 9 days after the color change in the urinary LH (luteinizing hormone) test kit. Your brain produces LH in order to trigger ovulation. A "surge" in LH usually happens between cycle days 12 and 16. LH can be detected in the urine with commercially available kits (we recommend Ovuquick and ClearPlan Easy). You may be asked to test your urine each morning, starting about cycle day 11, or 2 or 3 days before the anticipated day of the LH surge. Ovulation should occur 12 to 36 hours after the color change (surge) is detected. "False" or premature surges usually are of fainter color than the real surge.

In cases where the calculated day of obtaining the progesterone test happens to be a Sunday or holiday, the test can be done on the previous or subsequent day.

A progesterone value of 10-15, or greater, is usually considered to be adequate. If the progesterone value is low, then it may be necessary to use an ovulation-inducing drug such as clomiphene (see separate information sheet).

5. Other blood testing

In some patients, testing may be done for past exposure to rubella (German measles) or chicken pox (varicella). Most women have had these infections during childhood and are immune to them. If you have not had rubella or chicken pox, then you may choose to be vaccinated to reduce the chance of contracting rubella or chicken pox while pregnant. Women who develop rubella or chicken pox infection during pregnancy are at an increased risk of having a miscarriage or a baby with birth defects.

6. The postcoital test

A postcoital test may be obtained to assess the quantity and quality of cervical mucus, and its interaction with sperm. This test is usually done 2 to 24 hours after intercourse, and within a few days before the anticipated day of ovulation. It is painless and involves the removal of a small sample of cervical mucus. Abnormal postcoital tests may be due to poor timing, lack of ovulation, poor sperm counts, poor mucus production, infection, or the presence of antibodies against sperm.

7. Ultrasound

An ultrasound may be obtained to examine your uterus, ovaries, or baby. An ultrasound does not expose you to X-rays and is believed to be safe, even in pregnancy. Almost all ultrasounds done at our office are vaginal ultrasounds. On occasion, ultrasounds may be obtained while you are having your period.

At the time of the ultrasound, you will be asked to undress from the waist down. Remove your underwear and, if applicable, tampon before the ultrasound. You will be given a sheet to cover yourself. If necessary, use the bathroom before being called to your ultrasound.

8. The HSG (hysterosalpingogram, "dye test")

The HSG is an x-ray that is done to assess the shape of the uterine cavity and the patency (absence of blockage) of the fallopian tubes, allowing for eggs and sperm to meet, and fertilization to occur.

Abnormalities of the uterine cavity detectable by HSG include some kinds of fibroid (non-cancerous tumor), polyps, scar tissue, and problems with the general development and shape of the uterus. The HSG cannot diagnose endometriosis, problems with your ovaries, or the presence of scar tissue in your pelvis, but outside the uterus.

The HSG is usually done in the radiology department of a hospital or clinic. It should be done after menstrual bleeding has stopped, but before ovulation. The HSG should not be done if you could be pregnant. If your last period was abnormal, or if you are not certain that you are not pregnant, you should have a pregnancy test done. In women with a history of pelvic infection, antibiotics may be given to reduce the risk of a flare-up of infection. Nevertheless, infection necessitating hospital admission may occur following an HSG.

Many women experience minimal to no discomfort from an HSG, but in general, we recommend that you take 400-800 mg of ibuprofen (Advil, Motrin, *etc.*) about 1-2 hours before the x-ray. If you have problems with aspirin or aspirin-like drugs, or a history of stomach ulcers, then please let us know so that we can prescribe another kind of pain medication.

The HSG involves the instillation of a small quantity of a clear liquid into your uterine cavity. This liquid is visible on x-ray film and outlines your uterine cavity and fallopian tubes. The liquid contains iodine, and if you are allergic to iodine, seafood, or radiological contrast media ("dye"), then you need to let us know so that we can avoid an allergic reaction.

Any discomfort or spotting that you may have following an HSG should resolve within a few hours or a day or two. If you have progressively worsening pain, bleeding, fever, nausea, vomiting, diarrhea, or other serious symptoms, then you should call our office.

A "spin-off" of the HSG is that during the ensuing three months or so, your chance of becoming pregnant is increased (if the HSG was normal).

9. Endometrial biopsy

An endometrial biopsy consists of the sampling of the uterine lining. This is done in the office and takes only a few minutes. This test is usually done to determine whether the uterine lining is adequately prepared for the implantation of an embryo. It may cause a mild degree of uterine cramping. If you were pregnant at the time of the biopsy, then the risk of disrupting that pregnancy would be about 4%. Other complications, such as uterine perforation, infection, or bleeding, are rare.

10. Counseling

Infertility and the involved testing and treatment can be stressful and emotionally taxing. We have an experienced infertility counselor available for you and encourage you to use her services. For some treatments, counseling is required.

11. When you become pregnant . . .

If you do not have a menstrual period within 2 to 3 days after the expected time, you should call us to obtain a pregnancy test. Initially, your pregnancy will be monitored closely, because patients with a history of infertility may have an increased risk of ectopic (tubal) pregnancy. Tubal pregnancies and other types of ectopic pregnancies can cause serious complications. Once we have confirmed a normal pregnancy within your uterus, you should continue your prenatal care with an obstetrician. Usually, this will be the physician who referred you to us. If you wish, we can refer you to a suitable obstetrician.

For most patients, sexual activity in early pregnancy does not cause any problems, unless complications such as bleeding or cramping should occur. Air travel and moderate physical activity, including non-contact sports, are usually safe in early pregnancy.

12. Insurance

It is suggested that you inquire with your insurance representative as to which services are covered by your policy. Many insurance plans require specific approval before certain services are rendered. There may be other rules and restrictions that you might want to be aware of. Although we participate in most insurance plans, in those cases where we do not, you may be able to obtain "out of network coverage" or "gap coverage."