

# Reproductive Facts

Patient fact sheet developed by the  
American Society for Reproductive Medicine



## Diagnostic Testing for Infertility

### When is fertility testing recommended?

Fertility testing is typically recommended for heterosexual couples who have not become pregnant after 12 months of trying to conceive. Earlier evaluation is appropriate after six months for over the age of 35, or for younger people with known health concerns that may make it more difficult to get pregnant, for example:

- History of irregular menstrual cycles (over 35 days apart or no periods at all)
- Known or suspected problems with the uterus (womb), tubes, or other problems in the abdominal cavity (like endometriosis or adhesions)
- Known or suspected male infertility problems
- History of cancer treatment in either partner
- Individuals or couples planning treatment with donor sperm, donor egg, donor embryo or a gestational carrier.

Any evaluation for infertility should be done in a focused and cost-effective way to find all relevant factors and should include both partners.

**The least invasive methods that can detect the most common causes of infertility should be done first.**

The speed and extent of evaluation should take into account the couple's preferences, age, the duration of infertility, and unique features of the medical history and physical examination.

### The following test are recommended:

#### Semen Analysis:

The semen analysis is an essential part of the infertility evaluation. A semen analysis should provide information about the number, movement, and shape of the sperm. A semen analysis is necessary even if the partner has had children before. *cupatisto quas et experunt.*

#### Hysterosalpingogram (HSG) or Saline Infusion Sonogram:

This is an X-ray or ultrasound procedure to see if the fallopian tubes are open and to if the shape of the uterine cavity is normal. A catheter is inserted into the opening of the cervix through the vagina. A liquid is injected through the catheter. The contrast fills the uterus and enters the tubes, outlining the length of the tubes, and spills out their ends if they are open.

#### Transvaginal Ultrasonography:

An ultrasound probe placed in the vagina allows the clinician to check the uterus and ovaries for abnormalities such as fibroids and ovarian cysts.

#### Ovarian Reserve Testing:

The best indicator of egg quality is the age of the ovaries. Young patients typically have eggs that contain the correct number of chromosomes that have a high chance of achieving pregnancy, while older patients, particularly patients over 40 years of age, have eggs with incorrect chromosome numbers that make it harder to get pregnant and also lead to a higher risk of miscarriage.

When testing ovarian reserve, the clinician is trying to predict how well the ovaries will respond to a hormone called Follicle Stimulating hormone (FSH). One of the most commonly used tests for ovarian reserve is a blood test called Antimullerian hormone (AMH). Another common test is to count the small follicles resting in the ovary by ultrasound. This is called an antral follicle count; these small follicles make AMH, and thus the AMH level is a good indicator of how many of these small follicles are in the ovary. Another common test to evaluate ovarian reserve is a blood test for follicle-stimulating hormone (FSH) drawn in the beginning of the menstrual cycle (typically days 2 to 5).

Ovarian reserve testing is more important when the patient is 1) over age 35 years; 2) has a family history of early menopause; 3) has a single ovary; 4) has a history of previous ovarian surgery, chemotherapy, or pelvic radiation therapy; 5) has endometriosis or unexplained infertility; or 6) has shown poor response to gonadotropin ovarian stimulation in prior treatment cycles.

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## Other Blood Tests:

Thyroid-stimulating hormone (TSH) and prolactin levels are useful in identifying thyroid disorders and hyperprolactinemia, which may cause problems with fertility, menstrual irregularities, and repeated miscarriages. When excess hair growth is present (called hirsutism) on the face and/or down the middle of the chest or abdomen, blood tests for dehydroepiandrosterone sulfate (DHEAS), 17- $\alpha$  hydroxyprogesterone, and total testosterone should be considered. A blood progesterone level drawn in the second half of the menstrual cycle can help determine whether ovulation has occurred.

## Urinary Luteinizing Hormone (LH):

Over-the-counter "ovulation predictor kits" detect the presence of LH in urine and can detect a rise in this hormone that occurs one to two days before ovulation. In contrast to blood progesterone levels, urinary LH tests can predict ovulation before it occurs. Urinary LH testing helps define the times of greatest fertility: the day of the LH surge and the following two days. However, these tests can be expensive and are most effective when menstrual cycles are regular, and 25-35 days in length.

**For best results, the infertility evaluation should be individualized based on each person's specific circumstances.**

Revised 2023