

## Infertility and Diet

The recommendations that follow are aimed at preventing and reversing ovulatory infertility, which accounts for one quarter or more of all cases of infertility. They won't work for infertility due to physical impediments like blocked fallopian tubes.

**Avoid trans fats.** These artery-clogging fats threaten fertility as well harm the heart and blood vessels. Go trans free.

**Use more unsaturated vegetable oils.** Monounsaturated and polyunsaturated fats help improve the body's sensitivity to insulin and cool inflammation, two trends that are good for fertility. Add in more vegetable oils, nuts, seeds, and cold water fish such as salmon and sardines. Cut back on saturated fat.

**Turn to vegetable protein.** Replacing a serving of meat each day with beans, peas, soybeans or tofu, or nuts can improve fertility.

**Choose slow carbs, not no carbs.** Choosing slowly digested carbohydrates that are rich in fiber, like whole grains, vegetables, whole fruits, and beans, instead of rapidly digested carbs can improve fertility by controlling blood sugar and insulin levels.

**Make it whole milk.** Skim milk appears to promote infertility. If you drink milk, choose whole milk while trying to get pregnant, or have a small dish of ice cream or full-fat yogurt every day.

**Take a multi-vitamin.** Getting extra folic acid (400 micrograms a day) before you get pregnant could actually help you start eating for two.

**Get plenty of iron from plants.** Extra iron from plants, including whole-grain cereals, spinach, beans, pumpkin, tomatoes, and beets, appears to promote fertility.

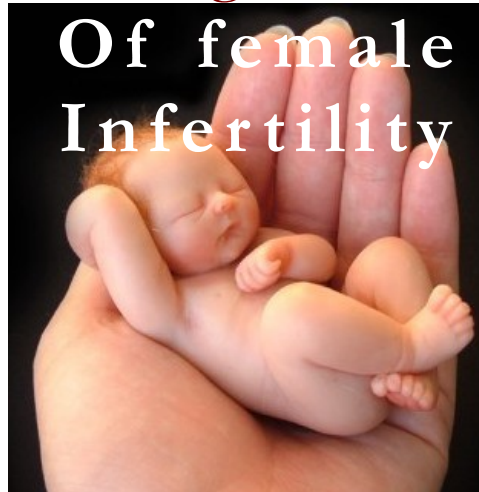
**Drink to your health.** The best beverage for keeping your body hydrated is water. Coffee, tea, and alcohol are okay in moderation. But skip sugared sodas—they appear to promote ovulatory infertility.

**Head toward the fertility zone for weight.** Weighing too much or too little can interrupt normal menstrual cycles, throw off ovulation or stop it altogether. The best range for fertility is a body-mass index (BMI) of 20 to 24. Working to move your BMI in that direction by gaining or losing some weight is almost as good.

**Move to the fertility zone for activity.** If you don't get much physical activity and are above the fertility zone for weight, daily exercise can help improve fertility. But don't overdo it: too much exercise, especially if you are quite lean, can interfere with ovulation.



## Diagnosis Of female Infertility



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In any fertility work-up, both male and female partners are tested if pregnancy fails to occur after a year of regular unprotected sexual intercourse. Fertility testing should especially be performed if a woman is over 35 years old or if either partner has known risk factors for infertility. An analysis of the man's semen should be performed before the female partner undergoes any invasive testing.

### Medical History and Physical Examination

The first step in any infertility work up is a complete medical history and physical examination. Menstrual history, lifestyle issues (smoking, drug and alcohol use, and caffeine consumption), any medications being taken, and a profile of the patient's general medical and emotional health can help the doctor decide on appropriate tests.

### Easy Preliminary Steps

Before embarking on an expensive fertility work-up, the following steps are free or low-cost and can be helpful:

- Monitor basal body temperature. This is accurate in determining if ovulation is actually taking place.
- Test the consistency of your cervical mucus. Collect some mucus between your two fingers and stretch it apart. If you are near the time of ovulation, the mucus will stretch more than 1 inch before it breaks. As an alternative, at-home kits can test saliva as substitute for checking cervical mucus.
- Take an over-the-counter urine test for detecting luteinizing hormone (LH) surges. This helps determine the day of ovulation. Tests are also available to measure levels of follicle-stimulating hormone (FSH). However, these at-home tests may not be as accurate as those performed in a doctor's office.

## Laboratory Tests

Several laboratory tests may be used to detect the cause of infertility and monitor treatments:

**Hormonal Levels.** Blood and urine tests are taken to evaluate hormone levels. Hormonal tests for ovarian reserve (the number of follicles and quality of the eggs) are especially important for older women.

Examples of possible results include:



- High follicle-stimulating hormone (FSH) and luteinizing hormone (LH) levels and low estrogen levels suggest premature ovarian failure.
- High LH and low FSH may suggest polycystic ovary syndrome or luteal phase defect.
- High FSH and high estrogen levels on the third day of the cycle predict poor success rates in older women trying fertility treatments.
- LH surges indicate ovulation.
- Blood tests for prolactin levels and thyroid function are also measured. These are hormones that may indirectly affect fertility.

**Clomiphene Challenge Test.** Clomiphene citrate (Clomid, Serophene), a standard fertility drug, may be used to test for ovarian reserve. With this test, the doctor measures FSH on day 3 of the cycle. The woman takes clomiphene orally on days 5 and 9 of the cycle. The doctor

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measures FSH on the tenth day. High levels of FSH either on day 3 or day 10 indicate a poor chance for a successful outcome.

**Tissue Samples.** To rule out luteal phase defect, premature ovarian failure, and absence of ovulation, the doctor may take tissue samples of the uterus 1 - 2 days before a period to determine if the corpus luteum is adequately producing progesterone. Samples taken from the cervix may be cultured to rule out infection.

**Tests for Autoimmune Disease.** Tests for autoimmune disease, such as hypothyroidism and diabetes, should be considered in women with recent ovarian failure that is not caused by genetic abnormalities.

### Imaging Tests and Diagnostic Procedures

If an initial fertility work-up does not reveal abnormalities, more extensive tests may help reveal abnormal tubal or uterine findings. The four major approaches for examining the uterus and fallopian tubes are:

- Ultrasound (particularly a variation called saline-infusion sonohysterography)
- Hysterosalpingography
- Hysteroscopy

- Laparoscopy

Combinations of these imaging procedures may be used to confirm diagnoses.

**Ultrasound and Sonohysterography.** Ultrasound is the standard imaging technique for evaluating the uterus and ovaries, detecting fibroids, ovarian cysts and tumors, and also obstructions in the urinary tract. It uses sound waves to produce an image of the organs and entails no risk and very little discomfort.



Transvaginal sonohysterography uses ultrasound along with saline infused into the uterus, which enhances the visualization of the uterus. This technique is proving to be more accurate than standard ultrasound in identifying potential problems. It is currently the gold standard for diagnosing polycystic ovaries.

**Hysteroscopy.** Hysteroscopy is a procedure that may be used to detect the presence of endometriosis, fibroids, polyps, pelvic scar tissue, and blockage at the ends of the fallopian tubes. Some of these conditions can be corrected during the procedure by cutting away any scar tissue that may be binding organs together or by destroying endometrial implants.

Hysteroscopy may be done in a doctor's office or in an operating room, depending on the type of anesthesia used. The procedure uses a long flexible or rigid tube called a hysteroscope, which is inserted into the vagina and advanced through the cervix to reach the uterus. A fiber optic light source and a tiny camera in the tube allow the doctor to view the cavity. The uterus is filled with saline or carbon dioxide to inflate the cavity and provide better viewing. This frequently causes cramping.

There are small risks of bleeding, infection, and reactions to anesthesia. Many patients experience temporary discomfort in the shoulders after the operation due to residual carbon dioxide that puts pressure on the diaphragm.

**Hysterosalpingography.** Hysterosalpingography is performed to discover possible blockage in the fallopian tubes and abnormalities in the uterus:

- The doctor inserts a tube into the cervix through which a special dye is injected. (The patient may experience some cramping and discomfort.)
- The dye passes into the uterus and up through the fallopian tubes.
- An x-ray is taken of the dye-filled uterus and tubes.
- If the dye is seen emerging from the end of the tube, no blockage is present. (In some cases, hysterosalpingography may even restore fertility by clearing away tiny tubal blockages.)
- If results show blockage or abnormalities, the test may need to be repeated. In case of blockage, hysterosalpingography may reveal a number of conditions, including endometrial polyps, fibroid tumors, or structural abnormalities of the uterus and tubes.

There is a small risk of pelvic infection, and antibiotics may be prescribed prior to the procedure.



**Laparoscopy.** Laparoscopy is a minimally invasive surgical procedure. It requires general anesthesia and is performed in an operating room. The surgeon makes a very small incision below the belly button and inserts an instrument called a laparoscope, which is similar to a hysteroscope. (The difference is that a laparoscope is inserted through the abdomen, while a hysteroscope is inserted through the vagina and cervix.) Through the laparoscope, the surgeon can view the uterus, fallopian tube, and ovaries. Laparoscopy is most helpful for identifying endometriosis or other adhesions that may affect fertility.

*Information contained in this booklet is meant for informational purposes only and should not substitute the visit to your doctor nor his/her advice for your health care.*