



Infertility

Infertility affects more than 4.9 million couples in the United States. Defined as the inability to conceive after a year of unprotected intercourse, or the inability to carry a child to term, infertility is a growing problem among women and men. Experts say this is because more women are waiting until they are older to have children, which increases the chances that their fertility has been affected, possibly by a previous sexually transmitted infection, pelvic inflammatory disease, scarring from earlier surgery, or the aging process itself.

While 86 percent of couples do conceive a child within two years without assistance, one in seven has difficulty. The cause of infertility may lie within the body of the woman or the man, or it may be a combination of factors from both partners. It is estimated that 40 percent of infertility problems can be attributed to causes within the man, and 40 percent to the woman, while 20 percent are caused by problems within both the man and the woman or are unexplained. An estimated 25 percent of infertile couples have more than one factor causing infertility.

If conception is not successful after more than a year of unprotected intercourse (six months if the woman is aged 35 or older), it may be time to seek help. A gynecologist or a specialist known as a reproductive endocrinologist can recommend simple self-help measures to improve the chances of conception. A woman can try to predict ovulation by using the sympto-thermal method of charting her cycle. Intercourse during the six days that end in ovulation is most likely to cause pregnancy. It is important to be sure that the semen is placed high in the vagina, near the cervix.

In addition, some practitioners recommend alternative therapies, such as acupuncture, herbal medicine, and homeopathic remedies, for treatment of infertility.

Infertility in Women

There are many causes for infertility in women. The fallopian tubes may be blocked, preventing the egg from being fertilized and delivered to the uterus. Endometriosis, sexually transmitted infections, or scarring from previous surgery can cause such damage. Ovulation can be affected by hormonal imbalances, thyroid disorders, or chronic diseases, such as diabetes. The uterus may be shaped incorrectly for implantation or may contain tissue that

interferes with implantation. In some women, antibodies that block sperm from the uterus may be present in the cervical mucus.

There are many diagnostic tests that can be used to determine the cause of infertility in women. An endometrial biopsy can be done to examine the lining of the uterus and check whether ovulation has occurred. Urine and blood tests are used to measure hormone levels. A postcoital pelvic examination may be done a few hours after intercourse to examine the progress of the sperm and check for antibodies in the cervical mucus.

More invasive tests include a hysterosalpingogram, in which dye is slowly injected into the uterus as x-rays are taken. The dye allows the clinician to see the shape of the uterus and fallopian tubes, as well as any abnormalities and blockages. A laparoscopy is a minor but technically difficult procedure done under general anesthesia — a viewing scope is inserted into a small incision in the abdomen to search for endometriosis or scar tissue and to look at the functioning of the fallopian tubes. A hysteroscopy is the insertion of a viewing instrument through the vagina into the uterus to look for a cause of infertility.

Infertility problems linked to endometriosis, fibroids, or a specific infection may be solved by treating the condition itself. If the problem is determined to be hormonal, a fertility drug, such as clomiphene citrate (Clomid), can be used to stimulate the pituitary gland. The pituitary gland releases follicle-stimulating hormones (FSH) and luteinizing hormones (LH), that increase the ripening and number of eggs being released. Human menopausal gonadotropin (Pergonal) contains FSH and LH and therefore acts directly on the ovary in the same way. Multiple embryos can result from the use of fertility drugs, since several eggs may be released at once. A injection of HCG (human chorionic gonadotropin) is then given to prompt release of the eggs in a predictable way. A side effect of fertility drugs is hyperstimulation syndrome, which results in swollen, painful ovaries.

Although a causal relationship between increased stimulation of the ovaries and ovarian cancer has not been determined, some studies have indicated that the use of clomiphene may increase the risk of ovarian cancer when used for a long period of time. This risk, however, has not been confirmed. The risk of ovarian cancer is related to the number of ovulations. The number is increased with the use of fertility drugs that stimulate ovulation and decreased



with the use of contraceptive drugs, such as oral contraceptives, that suppress ovulation.

Fallopian tubes can be reconstructed or repaired surgically (but never completely) if the damage is not severe. Though success varies, balloon tuboplasty, a variation on a technique developed to treat heart conditions, is sometimes used to clear fallopian tubes. In the procedure, a tube with a small balloon is inserted into the fallopian tube. When the balloon is expanded, the tube is stretched and the blockage pushed aside. Scar tissue and adhesions can also be removed surgically in some cases. A specialist is recommended for such procedures because the organs are very delicate and can be easily damaged further.

Infertility in Men

In men, infertility results from low sperm count (the percentage of sperm per milliliter of semen), a decrease in sperm motility (the percent of sperm moving rapidly), or poor sperm morphology (the shape of the sperm allows it to penetrate the egg). An enlargement of the veins surrounding the spermatic cord, called a varicocele, may be present, causing a drop in sperm count. Sperm ducts may become blocked, or sexual dysfunction may prevent ejaculation. Trauma or injury to the scrotum and testes, sexually transmitted infections, excessive drug and alcohol use, and hormone imbalances can also affect fertility.

Before any testing for the woman begins, experts recommend a semen analysis, a simple, noninvasive procedure to check sperm number, shape, and viability. If the problem is found to be an infection or sexual dysfunction, infertility may be solved by curing that condition. Low sperm count and motility can be remedied with hormone injections, and varicoceles and blockages can sometimes be surgically repaired. A man may also opt to avoid surgery and choose donor insemination to achieve conception. A urologist generally treats fertility problems in men.