

Treatment of Male Infertility

Intracytoplasmic Sperm Injection (ICSI)

Intracytoplasmic Sperm Injection (ICSI) is a technique in which sperm are injected directly into the main part of the egg. It can produce pregnancy in cases of infertility where in the past success was very unlikely.



Indications for ICSI at present include severe male factor infertility (less than one million sperm), history of multiple failed IVF cycles, almost all cases of microsurgical sperm aspiration and problems with zona pellucida penetration. The procedure may also be tried in cases of antibodies bound to sperm and sperm defects that suggest low success with standard IVF. Success rates with ICSI vary tremendously with the treatment center and the skill of the technologist (30-50 percent).



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Treatment of male factor infertility can be divided into two basic categories of therapy:

- Specific therapy to improve semen quality, and
- Assisted reproductive technologies which bring the sperm closer to the egg.

Improving Semen Quality

- Many problems identified through testing can be treated to improve semen quality
- Treatment may include changing practices such as smoking, abuse of alcohol, use of recreational drugs, exposure to harmful chemicals and regular use of hot tubs
- The effects of chemotherapy on semen quality may also be reversible with time
- Severe hormone imbalances may be treated with medication
- If infection or inflammation is present in the semen, treatment with antibiotics and/or anti-inflammatory drugs may improve semen quality
- Options for men with Antisperm antibodies include medical treatment with steroids, sperm processing in conjunction with intrauterine insemination (IUI), in vitro fertilization (IVF), or ICSI
- Some varicoceles, varicose veins of the testis, may affect semen quality. Minor surgery to correct these varicoceles may lead to significant improvement in many men
- Blockages of the ejaculatory ducts or the epididymis may hide normal sperm production. Some blockages may be surgically treated successfully. If correction is not possible, sperm may be retrieved from the epididymis or testis by needle biopsy. Because of the low numbers of sperm, this procedure is almost always combined with intracytoplasmic sperm injection

Moving the sperm closer to the egg

Retrograde ejaculation (where sperm is ejaculated into the bladder instead of through the penis) and anejaculation (the inability to ejaculate) may be treated by medication, surgery or medically assisted sperm retrieval.



Insemination

Placing semen in the uterus (IUI) or in the opening of the cervix at the time of ovulation is effective for some couples. When this procedure is used, ovulation is often induced by drugs.

Husband semen can be used for intra-cervical and intrauterine insemination: the pregnancy rate for induced ovulation with IUI is approximately 20 per cent over three cycles.

In Vitro Fertilization (IVF)



In vitro fertilization is the placement of eggs and sperm together outside the body to achieve fertilization. IVF may be suggested in non-treatable cases of male factor fertility disorders with a total moving sperm count of less than five million and/or severe sperm shape deformities, and failure with induced ovulation and IUI. 18.1 percent of couples will be successful in delivering a child with this procedure.