KELOWNA REGIONAL FERTILITY CENTRE

Intracytoplasmic Sperm Injection (ICSI)

What is it?

Intracytoplasmic sperm injection (ICSI) is a type of fertilization procedure used in the treatment of male infertility. The procedure involves collecting egg and sperm from each partner and then injecting a single sperm directly into the egg in the laboratory.

When is it used?

ICSI is used in the treatment of male factor infertility or for couples who have had poor or no fertilization during standard in vitro fertilization. It is also used for some couples with unexplained infertility. It is most commonly used in men who have:

- A high number of abnormal sperm
- Very few moving sperm
- Very low numbers of sperm
- Obstruction in the testes that prevents sperm release
- Antibodies against their own sperm
- A reversed vasectomy with low sperm quality
- Sperm retrieval or biopsy procedure
- Poor fertilization with IVF
- Prolonged unexplained infertility
- Severe endometreiosis

How is it done?

Eggs are retrieved during a standard in vitro fertilization cycle. Sperm are then collected and prepared in the lab to isolate as many healthy sperm as possible. Following a 4-6 hour resting period the outer coating of the egg is removed and eggs are assessed to ensure that they are mature enough to undergo the procedure.

Those eggs that are sufficiently mature are held in place using a specialized instrument and a very thin needle is used to select a single sperm. That sperm is pulled into the needle and the needle is inserted into the egg. The sperm is slowly injected into the egg and the needle is removed, leaving the sperm behind.

All eggs that are injected with a sperm are placed in an incubator and monitored for signs of fertilization and embryo formation. It is important to note that not all eggs fertilize and not all fertilized eggs go on to form embryos.

A number of factors determine how many embryos will be replaced. Your physician will discuss your options with you following egg retrieval and prior to implantation. Assuming that the remaining embryos are healthy they can be frozen for future use.

202-1630 Pandosy St. Kelowna BC V1Y 1P7 www.kelownafertility.ca
Ph 250.861.6811 F 250.861.6814 Toll Free 1.888.861.KRFC (5732)

What are the risks?

For a complete review of risk please refer to the Kelowna Regional Fertility Centre handout *In Vitro Fertilization (IVF)*

Birth Defects

- The goal of IVF is to help you have a healthy baby. Overall, there does not seem to be an increased risk of birth defects in children conceived through IVF compared to those who conceive naturally
- Because ICSI is relatively new technique first performed in 1992, long-term data concerning future health and fertility of children conceived with ICSI are not available. However, some studies of babies conceived through ICSI report an increased incidence of rare defects (<1% of children born from IVF-ICSI) know as imprinting disorders (including Beckwith-Wiedemann and Angelman syndromes), a congenital malformation called hypospadias, or sex chromosome abnormalities.

What are the success rates?

The Kelowna Regional Fertility Centre has a clinical partnership with Genesis Fertility Centre, where ICSI and in vitro fertilization are performed. At Genesis, an average of 70 – 80% of mature eggs fertilize normally. Even with ICSI there is a small chance that none of the eggs will fertilize. The clinical pregnancy rates are similar to those of standard in vitro fertilization and vary with the age of the woman. For the most current rates please refer to www.kelownafertility.ca.

Counselling is necessary

Infertility and the associated treatments can be a stressful time for couples. As a result The Kelowna Regional Fertility Centre provides counselling services and a comprehensive orientation to ensure that patients are comfortable and well informed during the entire process.

What is the cost?

ICSI is not an MSP-covered service in British Columbia. The Kelowna Regional Fertility Centre and Genesis Fertility Centre have a standard fee for this service. Please see the respective fee schedules for current pricing.