

INTRACYTOPLASMIC SPERM INJECTION (ICSI)

In many couples who are unable to conceive, sperm abnormalities exist that prohibit spontaneous fertilization. To help sperm that may otherwise not be able to fertilize an egg spontaneously, the techniques of micromanipulation were developed. One type of micromanipulation, Intracytoplasmic Sperm Injection (ICSI), involves the direct injection of one sperm into an individual egg. This injection process is performed in the laboratory shortly after egg retrieval.

WHO ARE CANDIDATES FOR ICSI?

Couples in whom at least one of the sources of infertility is related to sperm function, number, or quality. ICSI is recommended for couples in whom the sperm characteristics are too poor to perform traditional IVF (In-Vitro Fertilization). Additionally, ICSI is used when high levels of antisperm antibodies are present or if prior IVF attempts at fertilization have failed.

HOW LONG HAS ICSI BEEN PERFORMED?

Micromanipulation techniques began in 1989. The techniques have been refined since then. Each year, more than 10,000 cases of ICSI are performed in the United States. The oldest babies born from the ICSI technique were born in 1993.

HOW ARE SPERM CHOSEN?

The sperm specimen is processed to filter out the abnormally shaped and slow moving sperm. Once a sperm that meets the correct parameters for a normal sperm is found, it is drawn into the injection pipette then injected into a single egg.

CAN NORMAL SPERM BE GUARANTEED?

Semen is processed to prepare sperm for injection. There is no guarantee that the chromosomes inside the sperm head are normal. Presently, we rely on the sperm's appearance to select the appropriate sperm for injection.

WILL ALL EGGS SURVIVE THE INJECTION PROCESS?

About one-third or more of eggs retrieved will not fertilize despite injection of sperm into the egg. Some of these eggs will be irreparably harmed and discarded. Eggs that remain normal appearing may be reinjected. In general, the fertilized egg will be allowed to divide into two or more cells before transfer to the female.

_____ Female Initials _____ Male Initials

WHAT HAPPENS TO EXTRA EMBRYOS?

For many couples there will be more zygotes (fertilized eggs) or embryos (fertilized eggs that have divided into two or more cells) than can be safely transferred to the female at the original procedure. Extra embryos can be frozen and transferred in a separate cycle. The final disposition for frozen embryos will be clarified by a separate consent form.

ARE THE RISKS OF BIRTH DEFECTS INCREASED?

In couples who conceive naturally, the baseline risk for producing a baby with significant birth defects is 2 to 3%. In other words, 2 to 3 of every 100 babies born after natural conception will have significant birth defects. In addition to this baseline risk, ICSI derived pregnancies have approximately an additional 1-2% risk of chromosomal abnormalities. Also, it is known that any chromosomal or gene abnormalities which may have caused low sperm counts in the father may be transmitted to male children born after this procedure. There may be other risks to offspring which are currently unknown.

We recommend that couples who conceive by ICSI consider chromosomal evaluation of the fetus during pregnancy by either amniocentesis or chorionic villous sampling. Amniocentesis and chorionic villous sampling are not without risks. The risks will be explained to you by the obstetrician that may perform your procedure.

IS MISCARRIAGE INCREASED AFTER ICSI?

In naturally conceived pregnancies, the rate of miscarriage is approximately 20%. As women approach their 40th birthday the spontaneous miscarriage rate increases to 35 to 40%. ICSI does not increase a woman’s baseline miscarriage rate as determined by her age.

WHAT IF NO APPROPRIATE SPERM FOR INJECTION ARE AVAILABLE IN MY EJACULATE THE DAY OF EGG RETRIEVAL?

If your first semen sample produced the day of egg retrieval is without an adequate number of appropriate sperm for egg injection, a second, third or fourth sample may be requested. We realize that producing multiple specimens may be difficult. If you determine that producing additional specimens is difficult or impossible, please notify our RN Coordinator or Embryologist immediately. We may be able to recommend techniques that can improve chances of successful collection.

If collection by masturbation is unsuccessful, we may offer to aspirate fluid from the epididymis (the tube located inside the scrotum, beside the testicle) or testicle directly as a means to obtain sperm for egg injection. Aspiration of the testicle or epididymis is performed in the operating room under intravenous and local anesthesia.

Depending on your prior ejaculated sperm counts, you may be asked to provide a semen specimen for freezing several days before the egg retrieval. Unfortunately, semen of poor initial quality tend to freeze poorly. Therefore, your frozen, then thawed semen specimen may not provide any appropriate sperm for egg injection.

_____ Female Initials _____ Male Initials

INTRACYTOPLASMIC SPERM INJECTION (ICSI) CONSENT

We, _____, and _____ have read this information on Intracytoplasmic Sperm Injection (ICSI). Our questions regarding ICSI have been answered. We understand the techniques involved. We understand both the benefits and risks of proceeding with Intracytoplasmic Sperm Injection (ICSI). Our signatures below mean that we have freely agreed to continue with this procedure.

Female Signature

Date

Male Signature

Date

Witness Signature

Date