



What is ICSI?

Intracytoplasmic sperm injection, commonly known as ICSI, is a medical procedure that helps people who can't have a baby because of male fertility problems. There are many studies that show doing ICSI when there is no male factor infertility does not improve the chance of success. So ICSI should be restricted to those with male factor infertility.

ICSI is very similar to in vitro fertilization (IVF) (see information leaflet on IVF), the only difference being the way the eggs and sperm are mixed. The choice of whether to do ICSI or IVF depends on the sperm.

ICSI has to be done in a fertility clinic. Speak to your doctor about how you can access treatment. Sometimes it is funded by the health system, but sometimes patients have to pay privately.

Side Effects of Fertility Drugs

The drugs can have side effects such as:

- Mood changes
- Swelling of the stomach
- Headaches
- Breast pain
- Stomach upset
- Feeling hot suddenly

In rare cases, the ovaries can be overstimulated. The doctor will talk through any possible side effects in more detail.

Getting ready for ICSI

Before starting ICSI, a woman takes medication to help her ovaries produce about 8-12 mature eggs. The right dosage of these drugs depends on her age and specific health factors, and doctors determine this by testing her ovarian reserve - which is a test to determine the number of eggs a woman has left in her ovaries.

When she is taking fertility drugs, the doctors will monitor her progress with ultrasound scans and hormone tests. Sometimes, doctors have to adjust the drug dosage to make sure the eggs grow at the right speed.

When the eggs are mature, the woman gets a hormonal injection, usually late in the evening, and the mature eggs are collected about 36 hours later.

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Process

Collecting the Eggs

On the day of egg collection, the woman goes to the clinic and is lightly sedated. The doctor uses a needle to remove the mature eggs from the ovary and the eggs will be stored in the laboratory. The operation usually takes less than half an hour, and the woman goes home on the same day. While the risks of the operation are small, there's a small chance the needle could cause bleeding or an infection.

Obtaining the sperm

In men with male infertility, sometimes there are no sperm in the ejaculate and sperm may be aspirated from the male reproductive tract, such as from the testes.

In the Lab

The person who looks after the eggs, sperm and embryos in the laboratory is called an embryologist.

In the lab, the eggs are kept in special dishes in an incubator which is at body temperature. A single sperm is injected directly into each egg.

The day after the eggs are injected, the embryologist looks for signs of fertilization. This means that the egg and the sperm have joined to make an embryo. While many eggs will usually fertilize, often not all do and sometimes none do.

Over the next few days, the embryos are watched to see if they are growing correctly. Usually one embryo is transferred back to the woman's womb and any remaining that are suitable are frozen for future use.

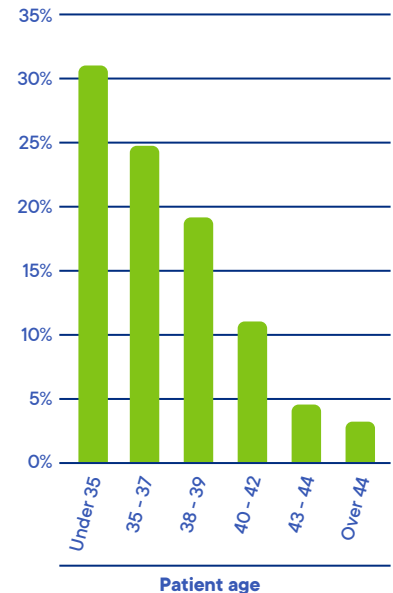
Transferring the Embryos

The embryo transfer is a quick process, though it can be uncomfortable for some women. Using a thin tube containing the embryo, the doctor places the embryo inside the womb, often with the help of an ultrasound to guide them.

Freezing Embryos

Extra embryos can be frozen and used later, which means the woman won't have to go through the whole ICSI process again if she wants another baby or if the original cycle did not work. Frozen embryo transfers can be just as successful as using fresh embryos.

Birth rate per embryo transferred



After the embryo transfer

After the transfer, the woman might take progesterone which helps the womb get ready for pregnancy. To see if she is pregnant after ICSI, she will take a pregnancy test about two weeks after the transfer of the embryo into her womb.

ICSI can be a complex process, and while it offers hope to many, it's not a guaranteed solution for everyone who is trying to conceive. The main factor that determines its success is the age of the women. For example, data from the UK shows that women under 35 have about a 30% chance of having a baby, but for women over 44, it drops to under 3%.

For many people, they may need to go through several rounds of ICSI before they become pregnant. Some people try many rounds of ICSI and are not successful.