

What is ICSI?

Intra-cytoplasmic sperm injection (ICSI) is a relatively new technique, introduced in 1992 to help certain types of infertility. Thousands of couples have become parents as a result of ICSI. It involves the injection of a single sperm directly into the centre of an egg to fertilise it, and in that way bypasses the natural process of the sperm travelling to the egg on its own.



How could ICSI help us?

ICSI could be helpful if the male partner's:

- sperm count is very low (oligozoospermia)
- sperm are abnormally shaped (poor morphology) and/or poor swimmers (poor motility)
- sperm cannot penetrate their partner's eggs for some reason
- tubes carrying sperm from the testicles to the penis (vas deferens) are damaged or missing
- immune system reacts to the sperm they produce (anti-sperm antibodies)

It can be used if the male partner has had a vasectomy which cannot be reversed. ICSI may also be an option if the male partner has had problems obtaining an erection and ejaculating. This includes men with spinal cord injuries, Hodgkin's disease, diabetes and numerous others.

A clinic may sometimes recommend ICSI if previous egg collections for IVF (in vitro fertilisation) treatment have produced only a few eggs that did not fertilise.

What is the difference between ICSI and IVF?

ICSI is very similar to IVF, with the same process of egg collection. The difference is in the process of fertilisation. Instead of the sperm being mixed with the eggs as in IVF, with ICSI, a single sperm is injected directly into each egg, with the clinic having selected the sperm that are most active and healthy. ICSI allows the use of sperm that may not otherwise have been able to fertilise an egg.

What are my chances of having a baby with ICSI?

The chances of having a baby using ICSI are similar to those for IVF, around 29% for women aged less than 35 years. As with most fertility treatment, success depends on many factors, including the women's age and if the cause of infertility has been identified.

What's involved if we want to have ICSI?

A low sperm count caused by genetic problems could be passed on to a male child, so it's a good idea to take a blood test before going ahead with ICSI. You should think about what it would feel like if these tests reveal that you carry a gene for a serious inherited disease – you may want to consider talking to the clinic's counsellor before going ahead with the tests.

Before starting any fertility treatment, your sperm is tested for hepatitis B, C, and HIV, along with other infectious diseases. After the tests, the process is the same as for standard IVF, with eggs stimulated, collected, fertilised and embryos placed into the womb. For more information on the IVF treatment process, see the HFEA Guide to Infertility (see Further Reading)

Does ICSI carry any risks to our baby?

Because ICSI is a fairly new treatment, it is not yet known whether there is any risk that injecting the sperm into an egg could damage it, with possible long-term consequences for the child.

It has been suggested that ICSI is associated with certain genetic and developmental defects in a very small number of children born using this treatment.

However, it is also possible that problems that have been linked with ICSI may have been caused by the underlying infertility - rather than by the technique itself.

Another issue to consider is the possibility that if your child conceived as a result of ICSI is a boy, he may inherit his father's infertility. At this stage it is too early to know if this is the case, as the oldest boys born from ICSI are still in their early teens. The HFEA continues to review the evidence on an ongoing basis. As ICSI is still quite new, children conceived using this method are still young.

Follow-up studies involve a fairly small amount of children and do not include effects that may only be seen in older children or in the next generation. If you decided to go ahead with ICSI, we would strongly encourage you to talk to your clinic about taking part in such studies.

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There may be an increased risk of miscarriage with ICSI because the technique uses sperm that would not otherwise have been able to fertilise an egg. It's important that you discuss possible risks with your doctor before going ahead with treatment. You may also find it helpful to discuss your concerns with the clinic's counsellor.

I've had a vasectomy. How can ICSI help us?

There are different procedures that can be used to obtain sperm even if you have had a vasectomy.

Useful contacts

ACeBabes

Support on pregnancy following fertility treatment, multiple births and donor conception for donors and recipients.

www.acebabes.co.uk Tel: 0845 838 1593

British Infertility Counselling Association (BICA)

BICA aims to promote high quality, accessible counselling services for those with fertility problems.

www.bica.net Tel: 01744 750 660

Sperm can be collected directly from the epididymis (situated inside the scrotum, the pouch holding the testicles, where sperm are stored and ripened) using a type of fine syringe.



This is known as 'percutaneous epididymal sperm aspiration' or PESA. Sperm can also be retrieved from the testicles, a process known as 'testicular sperm extraction' or TESE.

For more information about PESA and TESE and what they involve, and whether these may be options for you, please speak to your doctor.

What are my options if ICSI doesn't work?

If ICSI doesn't work, you may want to talk it over with your specialist and/or ask to speak to a counsellor. It may also be helpful to contact a patient support network and talk to other patients who have had ICSI treatment (see Useful Contacts). There is also the option of trying again, as some couples often have several treatment cycles of IVF or ICSI if it doesn't work first time around. If this continues to fail you may want to consider using sperm donation to conceive.

Infertility Network UK (I N UK)

Charity providing practical and emotional support for people experiencing difficulties in conceiving.

www.infertilitynetworkuk.com Tel: 08701 188 088

Further reading

The HFEA Guide to Infertility – see page 26-27 for information on ICSI, including a patient story. Order free copies by emailing admin@hfea.gov.uk or download it from our website.

Last updated: 17/10/2006