**INTRA CYTOPLASMIC SPERM INJECTION**

Though the treatment has been around for more than two decades, intracytoplasmic sperm injection (ICSI) is still considered a breakthrough procedure for treating [male infertility](https://www.babycenter.com/0_common-causes-of-fertility-problems-in-men_1228908.bc) and other problems in which fertilizing an egg may be difficult. With ICSI, a single sperm is injected directly into an egg.

ICSI is used with [in vitro fertilization (IVF)](https://www.babycenter.com/0_fertility-treatment-in-vitro-fertilization-ivf_4094.bc) and is performed in more than 65 percent of IVF procedures. As a result of IVF with ICSI, more than 17,000 babies are born in the United States each year.

**Is ICSI for me?**

ICSI may be a good option if you have:

* No sperm in your semen
* A low sperm count
* Slow sperm (low sperm motility)
* Abnormally shaped sperm
* Damaged or missing vas deferens (the tube that carries semen from the testes to the penis)
* Had a vasectomy
* Tried IVF but there were problems during the fertilization process

Your doctor might also suggest ICSI if you're using frozen eggs from a previous IVF cycle or if you've chosen to have your embryos undergo genetic testing before they're placed in the uterus.

**How does ICSI work?**

The timeline for ICSI treatment usually goes something like this:

* **Sperm collection.** You provide a semen sample. An embryologist (a scientist who specializes in sperm, eggs, and embryos) obtains sperm from the sample. The doctor may time sperm collection with your partner's egg retrieval, or the doctor can collect the sperm in advance and freeze it until your partner's eggs are ready to be fertilized.
* **Microsurgery (if needed).** When little or no sperm is in the sample, or you can't ejaculate, your doctor may perform microsurgery to remove sperm from the testicle or from the ducts that carry it. This procedure is usually done under local anesthesia, and the recovery isn't painful. You have to avoid strenuous activity for five to 10 days, but you can return to work in just a day or two**.**
* **Tissue sample (if needed).** If microsurgery doesn't work, the doctor takes a tissue sample from inside your testicle, which could contain sperm. (If no sperm is found, your doctor may suggest that you consider using donor sperm to conceive a child.)
* **Gathering the eggs.** When IVF treatment begins, your partner receives injections of a [gonadotropin](https://www.babycenter.com/0_fertility-drug-gonadotropins_6188.bc), a type of fertility drug to stimulate her ovaries to develop multiple mature eggs for fertilization. (She usually releases only one egg a month.) The doctor gives your partner an anesthetic and inserts an [ultrasound](https://www.babycenter.com/0_all-about-ultrasounds_329.bc) probe through her vagina to look at the ovaries and identify follicles – the fluid-filled sacs where eggs develop and mature. Then, a thin needle is inserted through the vaginal wall to remove the eggs from the follicles. Eight to 15 eggs are usually retrieved.
* **Fertilization.** Next, the embryologist injects the sperm, one at a time, directly into each of your partner's eggs. (By contrast, in traditional IVF, the sperm and egg are placed together in a glass dish and conception occurs when a sperm successfully enters the egg.) Three days later, each egg that was successfully fertilized becomes a ball of cells called an embryo.
* **Transferring the embryos.** Depending on your partner's age and other factors, the doctor places between one and five embryos in her uterus by inserting a thin catheter through the cervix.
* **Growing a baby.** If the treatment works, an embryo implants in your partner's uterine wall and grows into a baby. Extra embryos, if there are any, may be frozen and used in future IVF cycles. If more than one embryo was transferred, the chance of pregnancy is higher, but so is the risk of a multiple pregnancy – about 20 percent of babies born through IVF are [twins, triplets, or more](https://www.babycenter.com/0_your-likelihood-of-having-twins-or-more_3575.bc).
* **Testing for pregnancy.** Your partner takes a [pregnancy test](https://www.babycenter.com/0_home-pregnancy-tests_2029.bc) after the embryos are placed in her uterus.

Pregnancy tests can bring exciting news. Find out how they work, how to take one, and what factors could lead to seeing a false positive or negative.

**How long does ICSI take?**

It takes about four to six weeks to complete one IVF with ICSI treatment.

You have to wait for your partner's ovaries to respond to the medication and for her eggs to mature. While taking the medication, your partner visits the doctor every two or three days for blood work and ultrasound appointments. On the day of the egg retrieval, you and your partner spend several hours at the doctor's office or clinic, having her eggs and your sperm collected.

Then three to five days later your partner comes back to have the embryos inserted inside her uterus. This visit usually lasts about one hour. Your partner takes the [pregnancy test](https://www.babycenter.com/0_home-pregnancy-tests_2029.bc) about two weeks later.

**What's the success rate for ICSI?**

Pregnancy and live birth rates of IVF with ICSI are similar to traditional IVF without ICSI. Based on national data, the percentage of IVF cycles resulting in a live birth (meaning at least one baby is born) is about

* 40 percent for women age 34 and under
* 31 percent for women age 35 to 37
* 21 percent for women age 38 to 40
* 11 percent for women age 41 to 42
* 5 percent for women age 43 and over

**What are the pros of ICSI?**

* **Helps men with infertility**. ICSI treats severe infertility in men that is otherwise untreatable. It helps men who produce no sperm or very small quantities of sperm become fathers.
* **Boosts the chance of fertilization.** If you haven't had success with IVF due to problems fertilizing eggs, adding ICSI to your next treatment can improve the chance of fertilization because an embryologist handles the process in a lab