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## In vitro fertilisation IVF

**In vitro fertilisation (IVF – In Vitro Fertilisation or ICSI –IntraCytoplasmic Sperm Injection) method the most effective method of infertility treatment.**

The five steps of IVF and ICSI

Step 1	Ovarian stimulation (hormone treatment) and monitoring
Step 2	Egg retrieval
Step 3	Fertilisation of eggs
Step 4	Embryo development
Step 5	Embryo transfer

**1. Ovarian stimulation (hormone treatment)**– The goal of the hormone treatment is to stimulate the ovaries to produce multiple follicles simultaneously (controlled ovarian hyperstimulation).

**2. Egg retrieval or ovarian puncture**– The egg retrieval procedure is carried out under ultrasound guidance by means of a thin needle (this is called aspiration). Using the ultrasound probe as guidance, the doctor will first identify mature follicles and then pass a needle through the vagina, first into one ovary and then into the other, to gently aspirate follicular fluid from all mature follicles.

**3. Fertilisation of eggs (with IVF or ICSI method)**– In IVF, the eggs and the sperm are put together and placed in an incubator set at body temperature. ICSI is a high-precision procedure that involves injecting a single sperm directly into the cytoplasm of the egg under a microscope.

**4. Embryo development** – The cultivation of embryos in the laboratory begins as soon as the eggs have been obtained. The embryos are cultured in an embryoscope, which has a special built-in camera to continuously monitor the development of the embryos. Typically, embryos are transferred between day 3 (an embryo made up of 2-4 cells) and day 6 (a blastocyst made up of about 100 cells) of egg retrieval.

**5. Embryo transfer** – One to three embryos are selected for transfer into the uterus. The main criteria for the selection of embryos suitable for transfer are morphological appearance and cell number. The 1-3 most suitable (viable) embryos selected in the laboratory are aspirated with a syringe into a thin catheter, which is used to pass the embryos gently through the vagina and cervix into the uterine cavity.

**In Estonia, assisted reproduction is regulated by the:**

[Artificial Insemination](#)

[Embryo Protection Act](#)

