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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

