

## Stages of an IVF cycle



### 1. Planning the cycle and starting treatment

An IVF cycle usually begins with planning rather than medication. Your fertility team reviews the reason for treatment, prior test results, and the best protocol for your situation. This may include baseline ultrasound, blood tests, and a discussion of whether the cycle will use a fresh transfer, a freeze-all approach, or a frozen embryo transfer later in the same treatment pathway.

The aim at this stage is to choose a plan that gives the ovaries a controlled environment in which multiple follicles can develop. In some patients, the team also discusses add-on procedures such as preimplantation genetic testing or intracytoplasmic sperm injection, if they may be relevant. These decisions are individualized rather than automatic.

For many people, the first phase is emotionally important because it marks the move from testing into active treatment. It is normal to feel both relieved and anxious. A clear plan, written instructions, and knowing who to contact if questions arise can make the early part of the cycle easier to manage.

### 2. Ovarian stimulation and monitoring

The stimulation phase is often the longest part of the cycle. Ovarian stimulation medications are used to encourage several follicles to mature at the same time rather than just one dominant follicle. The exact drugs and schedule depend on the protocol, but the principle is the same: support the ovaries while preventing premature ovulation.

During this phase, the clinic usually follows fertility clinic monitoring with transvaginal ultrasound and blood tests. Ultrasound shows follicle size and number, while hormone testing, often including estradiol blood testing during IVF, helps the team judge response. Monitoring visits may happen every few days and become more frequent as follicles approach maturity.

This is also the stage where the team watches for over-response. A strong response can be desirable, but it may raise concern for ovarian hyperstimulation syndrome in some patients, which is one reason protocols are tailored carefully. If the response is too slow, medication adjustments may be considered. The goal is not simply to produce many eggs, but to produce mature eggs safely.

Patients sometimes describe this phase as the most logistical part of IVF. It often involves self-injection, timed appointments, and close communication with the clinic. Although demanding, the monitoring is what allows the cycle to stay as controlled as possible.

### **3. Trigger shot and egg retrieval**

When the follicles are ready, the team schedules a trigger injection to complete final egg maturation and set the timing for retrieval. This step is highly time-sensitive because egg collection must happen before spontaneous ovulation. The interval between the trigger and retrieval is planned carefully, often around a day and a half later, though protocols vary.

The next stage is egg retrieval, also called egg collection. It is usually done through transvaginal ultrasound-guided aspiration under sedation or anesthesia, so patients are typically comfortable and do not remember the procedure in detail. A needle is guided through the vaginal wall into each accessible follicle, and the fluid is sent immediately to the laboratory.

Not every follicle contains an egg, and not every egg retrieved is mature. That uncertainty is normal and is one reason the earlier stimulation and monitoring stages matter so much. Many people are surprised by how quickly the procedure itself is over, even though the preparation leading up to it may have taken many days.

After retrieval, some cramping, bloating, or spotting can occur. Clinics usually provide guidance on what is expected and what should prompt a call for medical advice.

#### **4. Fertilization and embryo culture in the laboratory**

Once eggs are collected, the laboratory team prepares them for fertilization. Sperm may be used with conventional insemination in IVF, where sperm are placed near the egg, or with intracytoplasmic sperm injection, where a single sperm is injected directly into an egg. The choice depends on sperm parameters, prior fertilization history, and clinic strategy.

This is a crucial branch point in the cycle. Some eggs fertilize normally, some do not, and not every fertilized egg continues to divide in a healthy way. The embryology team monitors the embryos over the next several days as they divide and develop. Early development is often described in terms of cleavage-stage embryos and, in some cycles, blastocyst stage embryos by day five or six.

The laboratory may also assess whether embryos are suitable for freezing, transfer, or further testing. In some cases, preimplantation genetic testing is discussed as part of the broader treatment plan. Importantly, embryo quality is only one part of the larger fertility picture; uterine factors, timing, and overall health also matter.

For patients, this stage can feel like a waiting period with little visible activity. In reality, a great deal is happening behind the scenes, and many clinics will share updates on fertilization and embryo development at specific intervals.

#### **5. Embryo transfer and luteal support**

Embryo transfer is the moment many patients have been working toward, but it is best understood as one step in a larger process. One or more embryos are placed into the uterus using a thin catheter, usually without anesthesia. The procedure is generally brief, and ultrasound guidance may be used to help position the embryo accurately.

Transfer may happen in the same cycle as retrieval, known as a fresh transfer, or later after freezing and thawing. The decision depends on ovarian response, endometrial readiness, embryo availability, and treatment planning. For some patients, a frozen transfer is preferred because it offers more flexibility or because the ovaries responded too strongly to stimulation.

After transfer, many clinics use luteal support after embryo transfer, usually progesterone-based, to help support the uterine lining during the implantation window. This stage does not guarantee implantation, but it is part of standard cycle support in many protocols.

Emotionally, the transfer day can feel significant and fragile at the same time. Some people want to celebrate the milestone; others protect themselves from expectations. Both responses are understandable. A calm plan for the hours and days afterward can help make the transition less overwhelming.

## **6. The two-week wait and pregnancy testing**

The period after transfer, often called the two-week wait after embryo transfer, is one of the hardest parts of IVF for many patients. Medically, this is the time when implantation may occur and early pregnancy hormone production may begin. Practically, it is a period of uncertainty when symptoms can be difficult to interpret and not very reliable as indicators of outcome.

Clinics usually recommend waiting for the scheduled pregnancy test rather than testing too early, because early home tests can be misleading. A blood test measures hCG more accurately and is the standard way many programs confirm whether implantation has occurred. If the test is positive, further blood work and ultrasound follow to confirm an ongoing pregnancy. If it is negative, the clinic should explain the next steps and discuss how to interpret the cycle as a whole.

However the result turns out, this stage can carry a lot of emotion. A pregnancy test is not just a number; it represents weeks of planning, injections, monitoring, hope, and vulnerability. Support from the fertility team, partner, family, or counselor can be valuable here. If the cycle does not lead to pregnancy, many people need time before deciding whether to try again or review the protocol.