

# Starting Your Fertility Journey

Your IVF Journey at TFI



Tennessee Fertility Institute

The Prelude Network™

# Welcome to Tennessee Fertility Institute

## **Our Purpose**

At Tennessee Fertility Institute (TFI), we're passionate about helping you grow your family, and we specialize in providing access to world-class IVF care to people of any age, gender, sexuality, or situation. Whatever your story, IVF helps make dreams of parenthood an achievable reality.

## **World-Class Physicians**

With over 45 years of combined expertise, our board-certified physicians have helped hundreds of people achieve their dream of experiencing parenthood.

## **Expert Embryologists with a Record of Success**

When it comes to selecting an embryologist, results matter. The team of embryologists have many successful pregnancies to their credit.

## **State-of-the-art Laboratories**

TFI laboratories are licensed, CAP-accredited, CLIA-certified, and class 100 cleanrooms. We utilize triple gas incubators to replicate the body's natural environment.

# What You Can Expect From TFI

TFI combines expertise and state-of-the-art technology with compassion for our patients to create the best experience and outcomes possible.

## **1-on-1 Guidance and Support**

There is no “one size fits all” approach to fertility. We treat our patients like family and our board-certified team of reproductive endocrinologists creates a treatment plan tailored to each situation and individual.

## **Cutting-Edge Science and Technology**

Industry certifications, 24/7 monitoring, treatments with breakthrough medical devices, and secure cryopreservation are just a few ways TFI uses technology to advance care.

## **Intelligent, Optimized Care**

Due to advances in infertility treatments pioneered at TFI, we offer our patients more efficient and economic care than many IVF providers.

## **Egg Bank Access**

To provide patients with a large range of options, TFI is also pleased to partner with MyEggBank®, the largest fresh and frozen donor egg bank in North America.

# What Is IVF?

In vitro fertilization (IVF) is a type of assisted reproductive technology (ART) where an egg is fertilized outside of the uterus. Once fertilized, the embryo is implanted into the uterus to grow and develop. Embryos can also be cryopreserved for future use, or donated. It takes several months, on average, to complete one IVF cycle and treatments may be repeated if necessary.

## The Benefits of IVF

IVF offers a solution to those who otherwise would not be able to conceive on their own. In addition to assisting with pregnancy, other benefits of IVF include:

- Timing – Your IVF journey starts when you are ready
- Fertility Preservation – You may choose to freeze your eggs, embryo(s) or sperm tissue for future use
- Screening for genetic abnormalities via Preimplantation Genetic Testing (PGT)
- Ability to use a donor egg or sperm



# Your IVF Experience with TFI

Tennessee Fertility Institute is committed to providing compassionate, personalized, and cost-effective IVF care so that your IVF journey is comfortable, positive, and fulfilling.

We start with an extensive consultation to discuss your history, hopes, and experiences before moving on to diagnostic, testing, and screening. Using that information, we create a personalized treatment plan. Counseling and emotional support is provided at every step of the way.

## Financial Options

Everyone deserves to have a chance at parenthood without financial limitations. TFI is happy to offer financing through Bundl Fertility so you can focus on your dreams of growing your family. Not only is Bundl convenient, but you don't pay on the principle until you have a baby. And if your treatments are unsuccessful, Bundl may refund some or all of your investment.



# An Overview of Your IVF Cycle

## 1. Stimulate Ovulation

To begin the IVF process, the physician will prescribe fertility medications to stimulate the ovaries to produce multiple eggs that can be retrieved for use.

## 2. Retrieve Mature Eggs

This 15- to 30-minute outpatient procedure uses an ultrasonic probe to guide a thin needle through the wall of the vagina into the ovary to collect mature eggs.

## 3. Collect and Prepare Semen Samples

Typically done on the day of the egg retrieval, sperm is obtained from a male partner, donor, or cryopreservation, then “washed” to separate the sperm from the fluids.

## 4. Fertilize and Develop the Embryos

Depending on your situation, the sperm and egg are placed in a petri dish to fertilize on their own or they're joined via intracytoplasmic sperm injection (ICSI), a procedure where a physician uses a thin needle to fertilize the egg with a single sperm. The samples are examined 12 to 16 hours later to confirm fertilization and then cultured for three to five days before being transferred to the uterus or cryopreserved.

# An Overview of Your IVF Cycle

## 5. Transfer One or Multiple Embryos

The final and most important step of IVF is transferring the embryos with an ultrasound-guided catheter with a procedure that's similar to receiving a routine pap smear. The Tennessee Fertility Institute follows the American Society for Reproductive Medicine (ASRM) guidelines and typically transfers one embryo at a time.

## 6. Perform a Blood Test to Detect Pregnancy

Nine to 11 days after the transfer, blood is drawn for a pregnancy test. If embryo implantation was successful and the patient is pregnant, the hCG hormone will be detected in their blood.

## 7. Freeze Remaining Embryos

If more embryos have developed than can be used, they can be frozen for future IVF attempts. TFI utilizes Vitrification — one of the newest technologies in cryopreservation that uses an ultra-rapid freezing technique to reduce ice crystal formation and protect the embryos.

# Medications We Use

Tennessee Fertility Institute uses different medications.

## **Precycle Synchronization Medications**

Medications to prevent premature follicle development include oral contraceptives such as birth control pills, oral estrogen medications like Estrace, and antagonist injections like Cetrotide and Ganirelix. If your protocol includes precycle medicine, and not all do, your physician will make a recommendation based on your needs.

## **Stimulation Phase Medications**

The stimulation phase of IVF begins with daily injections of fertility medications containing follicle-stimulating hormone (FSH), luteinizing hormone (LH), or low-dose CG to promote the maturation of the eggs.

Medications that contain FSH include Follistim and Gonal-F (pure FSH). Menopur contains is a medication that contains both FSH and LH.

Additionally, a microdose of lupron or antagonist medications such as Cetrotide and Ganirelix are often used to stop ovulation before retrieval.

Your fertility team will provide instruction on administering injections to yourself and will always be available to answer any questions.



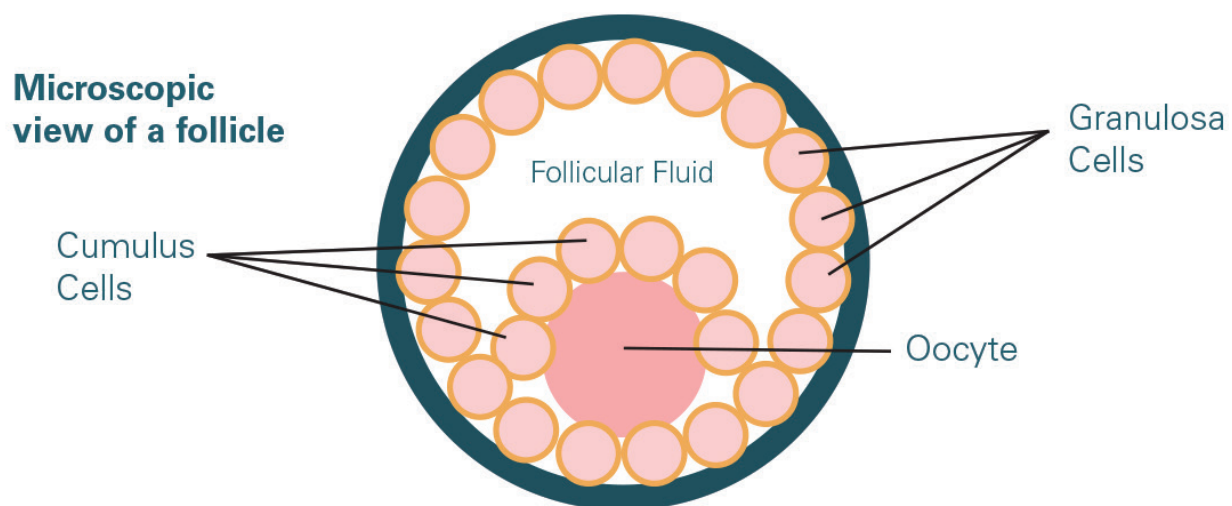
# How the Medications Work

## What are follicles and how do medications affect them?

Your IVF cycle begins once you start your injectable medications. The goal of these medications is to produce multiple eggs to be retrieved. Your physician will monitor follicle growth and the ovary's response to the medications.

Follicles are fluid-filled sacs inside the ovary, and each ovary contains hundreds of thousands of follicles. A follicle contains one egg (oocyte) surrounded by cumulus cells that support the egg's development.

In a normal menstrual cycle, one follicle grows and ovulates one egg, and the other follicles die off. Fertility medications stimulate multiple follicles to respond simultaneously, preserving the other follicles. This allows for numerous mature eggs to be retrieved.



# Monitoring Your IVF Cycle

Stimulation medications are taken for anywhere from eight to 14 days, during which time you will need to come to the office so that follicle growth can be monitored. These appointments have two parts.

The first is a blood test for a hormone known as estradiol. As the follicles mature, granulosa cells secrete the hormone. Hormone levels increase as eggs mature and follicles grow. Monitoring the change in hormone levels allows for follicle development to be followed.

The second is a vaginal ultrasound examination to view the ovaries and determine how many follicles are growing. The number of follicles indicates the success of the response to the medications, and larger follicles are a sign of mature eggs.

Everyone responds to IVF medications differently, with age, ovarian reserves, and dosage being just a few variables. Once follicles have grown to the preferred size, medication ceases. Your physician will inform you of this, do not stop taking medication without instruction.

# How to Prepare for Egg Retrieval

## What are trigger injections?

When the follicles have grown and the eggs are mature enough for retrieval, you will stop taking your stimulation medications and receive instructions to take one or more trigger injections.

Trigger injections give the final maturation signal and prepare the eggs for retrieval. The medications most commonly used are human chorionic gonadotropin (hCG, widely known as Novarel or Pregnyl), Lupron, or a combination of both.

## Why is timing critical with trigger injections?

Trigger injections are typically administered at night between 8pm and midnight. Taking the injection at the exact time directed is of the utmost importance because it triggers the last stages of egg maturation. Not doing so can result in the eggs not maturing or being retrievable.

## How long after the trigger injection are eggs retrieved?

Because ovulation would begin about 40 hours after the trigger injection, the egg retrieval takes place 36 hours after the trigger injection is administered to help retrieve the most mature eggs.

# Egg Retrieval

## The Procedure

Egg retrieval is a minor, 20-minute surgical procedure that's performed under sedation. The process involves using an ultrasound to carefully guide a thin needle through the vaginal wall into the ovary, where fluid and eggs are extracted from the follicles and collected in a test tube. The test tube immediately goes to the lab, where embryologists place the eggs into incubators for culturing.

After the retrieval, you will be taken to the recovery room and discharged within one to two hours, at which point the nurse will provide any instructions.

## The Sperm

At the same time that the egg retrieval is happening, sperm will also be collected. The sperm provider will need to provide a sample by masturbation. If frozen sperm is being used, it will be thawed. The sperm is then washed to remove other fluids and improve the chance of fertilization.

# Post-Retrieval

## How can you expect to feel after the retrieval?

After the retrieval process, you'll need someone to take you home so you can rest quietly for the remainder of the day. It's not necessary to remain in bed, but you should take it easy. Most patients are able to resume regular activities the following day.

You'll receive a fertilization report approximately 24 to 30 hours after the egg retrieval.



# What Is Preimplantation Genetic Testing (PGT)?

TFI provides PGT to patients who are undergoing IVF treatment. PGT, also called screening or diagnosis, is a series of tests that check for diseases and genetic disorders. One or more cells are taken from a fertilized egg and tested to determine if it's euploid or "normal" meaning that it has 23 pairs of chromosomes, or aneuploid or "abnormal" meaning at least one chromosomal abnormality is present. The testing typically happens five to seven days after the egg has been harvested and fertilized.

At TFI, we test for:

- Single-gene defects
- Chromosome translocations
- Aneuploidy



# Benefits of PGT

- Improves the likelihood of success with IVF
- Less risk of miscarriage
- Lessens the chance of Down syndrome and other chromosomal abnormalities
- Allows for eSET (elective single embryo transfer)

## Reasons to Consider PGT

- A history of recurrent miscarriage
- Increased risk of Down syndrome due to maternal age
- Risks associated with twin pregnancy
- Desire to use a surrogate

Our genetic counselors are here to answer your questions and discuss your concerns with PGT.



# Frozen Embryo Transfer

While genetic testing results are being determined, the embryos are frozen, or vitrified. When the genetic results identify euploid embryos, they are individually warmed and transferred to the uterus. This procedure enables patients greater options with IVF and family planning by allowing them to use embryos years later.

- Frozen Embryo Transfer (FET) Process
- Physician consultation
- Coordinator consultation
- Financial and administrative handling
- Medication administration
- Embryo transfer





# Self-Care Tips During Your Cycle

- Stay hydrated at all times.
- Follow a healthy, balanced diet.
- Avoid caffeine and alcohol.
- Avoid all herbal supplements.
- Engage in modest physical activity, don't overdo it.
- Manage discomfort with rest and Tylenol; avoid NSAIDS including ibuprofen, Motrin, and Aleve.
- White, cervical discharge is normal and expected as estrogen levels rise during stimulation.
- Applying ice and pressure to an injection site after administering medication can reduce bruising and discomfort.
- Reduce stress levels and manage stress effectively.
- Reach out to us with any questions you have at any point in the process.



# NOTES

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# Tennessee Fertility Institute

The Prelude Network™

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## **Proud Member of the Prelude Network™**

Tennessee Fertility Institute is proud to be a part of the Prelude Network™, the fastest-growing network of fertility centers in the North America. Together, we're on a mission to help educate women and men about their reproductive health and provide them with the best options, science, and care so everyone can have the opportunity to be a parent when they are ready.