



**— 9-POINT —**  
**COMPREHENSIVE GUIDE**  
**TO UNDERSTANDING IVF**

— A Free Pre-Order Gift from Mark P. Trolice, M.D. —

# Thank you for downloading the 9-Point Comprehensive Guide to Understanding IVF.

If you, a loved one or a friend, are having fertility issues and you think in vitro fertilization (IVF) may be able to help, this guide and checklist will help shed some light on what you need to know about IVF and who it is designed to help.

Getting accessible, credible, and easy-to-understand information about IVF can be challenging. That's why I'm pleased to offer you this resource to help you or a loved one make important future decisions along your fertility journey.

When choosing a provider, make sure their mission is to help you achieve your dream of building a family. They should offer a caring and comprehensive approach to male and female infertility that will make you feel at ease with the procedures necessary to realize your wish.

Facing infertility can be stressful, and with every question comes more uncertainty. In fact:

- Infertility problems impact close to 7 million women in America
- Infertility doesn't discriminate between men and women; in roughly 40% of infertile couples in the U.S., the male partner is either the sole cause or a contributing cause of infertility

Whether you are exploring IVF options or looking to preserve your fertility, choose a practice that can assist you with your family planning. I always encourage couples to review this resource together for general information on IVF techniques and technologies to supplement your visit, but this material is not intended to replace information provided by your physician.

It's important to stay informed with patient education and other valuable resources. Infertility treatment can be a cause for concern, but I believe the more you know about the tests and treatments, the less worry and stress you will experience throughout your fertility journey.

Choose a team of fertility specialists, nurses, and laboratory professionals that consider patient care a team effort. That team should also be committed to providing compassionate care that is personalized for every patient.

Sincerely,

Mark P. Trollice, MD, FACOG, FACS, FACE  
Director, Fertility CARE: The IVF Center  
Associate Professor, UCF College of Medicine

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# 1 What is IVF

During an IVF procedure, your eggs will be surgically retrieved and then fertilized in an embryology laboratory by mixing with a partner (or donor's) sperm. The fertilized egg, now an embryo, is left to grow for two to five days and is then surgically transferred back into your womb.

For 40 years, IVF has been at the forefront of assisted reproductive technology (ART) when the first baby was born using the procedure. IVF is the most common type of ART, used to create an embryo by bypassing certain causes of infertility, such as sperm abnormalities in men and fallopian tube disease or ovulation dysfunction.

**IVF literally means  
“within glass” fertilization,  
i.e., in the laboratory.**

IVF treatment can help couples who display the following:

- ☒ Low sperm counts
- ☒ Endometriosis
- ☒ Damage to the uterus or fallopian tubes
- ☒ Ovulation irregularities
- ☒ Sperm unable to penetrate or survive in the cervical mucus
- ☒ Other health or unexplained reproductive issues

Originally developed to assist women with damaged fallopian tubes, IVF has now emerged as the fertility treatment offering the highest monthly chance for a successful pregnancy above all other treatment options, regardless of diagnosis. Moreover, IVF now provides couples with the options of chromosomal and genetic testing of the embryos, prior their transfer and implantation inside the uterine cavity, to determine if there are any abnormalities.

## 2 Is IVF right for you

IVF is typically recommended for couples who display one or more fertility problems, such as:

- ☒ Obstructed fallopian tubes
- ☒ Absent or extremely low male sperm count and/or low mobility (motion)
- ☒ Severe endometriosis
- ☒ The woman being older than 38 years
- ☒ Severe ovarian aging or primary ovarian insufficiency (premature ovarian failure)
- ☒ Ovulation disorders resistant to medication
- ☒ Risk of transmission of genetic disease to the offspring

**IVF is generally recommended for couples that have failed to conceive after three to six IUI cycles.**

The chances of a fertile couple conceiving a child in any given month (called the natural pregnancy rate) are around 20% for women less than age 30; resulting in roughly ninety percent of couples becoming pregnant after one year of trying to conceive.

It's recommended that the remaining 10 percent of couples consult a fertility specialist. In particular, women over thirty are encouraged to undergo a fertility treatment evaluation, after 12 months of attempting to conceive. And it may be beneficial for women over forty to meet with a fertility doctor shortly after deciding to try and have a child.

The only way to know for sure if IVF is right for you is to undergo a complete exam and consultation with a fertility specialist.

# 3 Understanding IVF Treatment Cycles

The IVF process begins with the selection of a treatment plan by the physician that addresses the unique fertility issues of each couple. The treatment plan is then reviewed, one-on-one, with the IVF Nurse Coordinator ensuring that all of the couples' questions and concerns are addressed. Injection training and further education are also offered on an individual basis to allow for a more personalized experience.

Both you and your partner will be required to come to the office several times for tests and procedures during the treatment cycle.

Many different medications are taken during the IVF treatment cycle to assist or enhance your body's normal reproductive process. Your fertility specialist should establish a schedule to show you which drugs to take and when to take them. You will also learn how to administer these medications yourself.



## Stimulating the Ovaries

During an IVF cycle, you will be given a daily dose of injectable medications for ovarian stimulation and undergo blood tests and ultrasounds to ensure the eggs are retrieved at the precise time.

The IVF procedure begins by providing you with fertility medication to allow you to increase the number of eggs you release each month from your ovary. After stimulating your ovaries (with medication) to produce multiple follicular cysts – each containing an egg – you will receive a hormone injection to trigger maturation of the eggs, approximately 36 hours prior to your egg retrieval.

## Egg Maturation and Retrieval

When your follicles have reached an appropriate stage of development, your eggs will be retrieved using an ultrasound-guided aspiration needle, while you are under intravenous (IV) conscious sedation. Each cyst will be punctured and the fluid will be analyzed to identify an egg by the embryologist.

## Fertilization and Sperm Collection

The eggs then are immediately analyzed in the laboratory and eventually inseminated with sperm later that day for fertilization. Once the eggs are retrieved and the male partner collects his sperm, the laboratory personnel will perform either natural insemination of the eggs with sperm or **Intracytoplasmic Sperm Injection (ICSI)** to fertilize the eggs. ICSI is recommended when there is a significant concern over the sperm's fertilization potential and/or testicular sperm is necessary due to a lack of sperm in the ejaculate.

The eggs are then analyzed by an embryologist in the laboratory. If an egg is fertilized by a sperm, a zygote or pre-embryo will begin to develop. The pre-embryo remains in the incubator for two to five days while it continues to grow and divide.

Following embryo development, the embryo(s) are then transferred into your uterus between two to five days following egg retrieval.



## Embryo Transfer

Preimplantation Genetic Testing (PGT) with IVF is available for chromosome testing of embryos prior to transfer into the woman's uterus. PGT can expedite the time to pregnancy and reduce miscarriages as well as screen for inherited genetic diseases for which the couple may be at risk of transmitting to their baby, e.g. cystic fibrosis, sickle cell disease and spinal muscular atrophy.

After a discussion with your physician, an appropriate number of fertilized eggs (embryos) will be transferred to the uterus to optimize the implantation of a single healthy embryo. This procedure involves an ultrasound being used to guide a catheter through the cervix and into the uterine cavity.

The embryo transfer is very similar to a Pap test, in that it is painless and usually involves no anesthetic. The procedure is generally performed in an office procedure room and usually takes less than 30 minutes.

## Pregnancy

A pregnancy test will be conducted about two weeks after egg retrieval to determine if an embryo has implanted and is developing. If the test is positive, your first pregnancy scan will be performed three weeks later. If the test is negative, it is recommended you discuss additional treatment options with your physician.

Because not all embryos are guaranteed to evolve into full-fledged pregnancies, especially on the first attempt, multiple embryos are grown, and surplus embryos can be frozen for future use for another cycle attempt or child rather than the woman having to undergo another egg retrieval. In fact, patients usually require more than one embryo transfer before succeeding in becoming pregnant.



## 4 How much will IVF cost

The cost of diagnostic testing and management will vary among patients due to the individualized treatment approach found at most reputable fertility clinics. Ideally, their financial coordinator will work closely with patients to utilize their maximum insurance benefits for services.

Some clinics will even offer their own financing package to assist you in making payments over time for your IVF cycles.

**Patient options include affordable and predictable package pricing, financing options and 100% refund guarantee.**

Understanding insurance coverage and the cost of in vitro fertilization is not always easy. Our staff will take their time to discuss insurance options with you to make sure you understand your coverage entirely.



## 5 Success rates

Success rates vary from clinic to clinic and with different infertility diagnoses. The age of the woman undergoing the procedure is also a factor. The Centers for Disease Control and Prevention (CDC) collects success rates for assisted reproductive technology (ART) for some fertility clinics. The CDC reports that **the average IVF success rates** using one's own eggs begins to drop around age thirty and dips rapidly in the late 30s and early 40s, due to lower egg quantity and quality.

According to the **Society for Assisted Reproductive Technology** the IVF success rate in the U.S. for women of all ages is around 30 percent; however, when women under the age of 35 are taken into account, the IVF success rate becomes much higher.

In addition to age, success rates with IVF vary with respect to one's height, weight, infertility diagnosis, sperm count, and reproductive history, such as the previous number of pregnancies, miscarriages, and births.



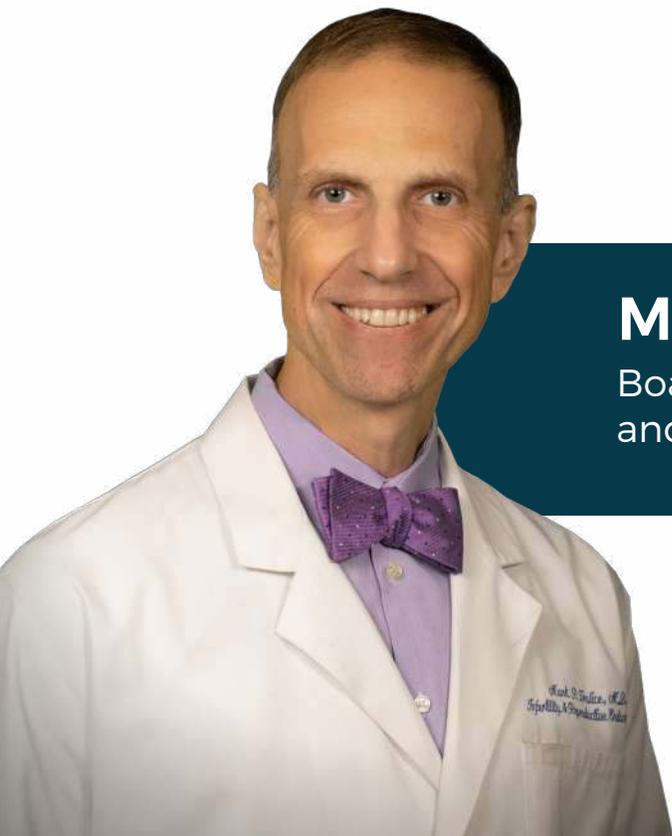
## 6 What to expect on your first visit

The goal of your first visit with a reproductive endocrinologist is to gather as much information as you can to help you make an informed decision about how to address your fertility concerns.

A excellent first step in preparing for your first visit is to develop a list of questions to ask to get the information you need. Sit down and brainstorm with your partner about what you need to know. We recommend you complete our history questionnaire and have all your pertinent medical records forwarded to our office before your appointment.

During your initial visit, the practice will take an extensive medical history of you and your partner. Then, they will perform a physical examination plus a pelvic ultrasound of your reproductive organs. Following that, they may also recommend any necessary diagnostic testing, discuss management options, review coping strategies and stress reduction and answer additional insurance and financial concerns.

You should allow approximately 90 minutes during this time.



### **Mark P. Trolice, M.D.**

Board Certified Reproductive Endocrinology  
and Infertility Specialist

## 7 What to expect on subsequent visits

Once you are in a treatment cycle, the number of trips to the office will vary according to your medications.

**Visits are usually 15 to 20 minutes (unless you have questions for the nurse and/or physician).**

In general, patients using clomiphene citrate require approximately two to three ultrasound visits plus an IUI. Gonadotropin injectable cycles require three to four visits, not including IUI. After you and your physician decide on the type of treatment, the nurse will go over the number of office visits expected for that particular cycle.



# 8 Are there any restrictions while undergoing IVF

**Yes.** Your doctor will recommend that you adhere to the basic guidelines below during the IVF process and into your pregnancy.

- ☒ **Smoking:** It's recommended that both partners stop smoking at least three months before beginning an IVF cycle, and before ovulation induction begins. The effects of tobacco have been shown to be toxic and harmful to a woman's eggs and sperm by potentially inducing genetic alterations. Cigarette smoking by a woman also increases the risk of miscarriage and ectopic pregnancy.
- ☒ **Drinking:** Alcohol use should be very limited or avoided during attempts at conception including your IVF treatment cycle. You should completely avoid alcohol when you conceive, and for the duration of the pregnancy.
- ☒ **Medications:** It's important to inform your doctor if you're taking any prescription or over-the-counter medications. Some medicines can interfere with the prescribed fertility medication or embryo transference, and others may not be safe for the baby during your pregnancy.
- ☒ **Vigorous exercise:** While mild to moderate levels of exercise are encouraged prior to and during your pregnancy, extreme exertion should be avoided as this may reduce your fertility.
- ☒ **Supplements:** Herbal supplements and any medications should ALWAYS be reviewed with your fertility doctor prior to an IVF treatment cycle to ensure safety and maximize your chance for a successful outcome.



# 9 What are the side effects and risks of fertility drugs, including the chance of multiple births

Fertility medication to induce ovulation will cause an increase in your estrogen production by your ovaries. This results in increased symptoms that mimic 'pre-ovulatory' feelings such as mood swings, headaches, hot flashes, abdominal pain, and bloating.

In very rare cases, fertility medication may induce ovarian hyper-stimulation syndrome (OHSS), which typically presents several days following egg retrieval and produces more severe symptoms such as:

- ☒ Vomiting
- ☒ Shortness of breath
- ☒ Decreased urinary frequency and output
- ☒ Feeling light headed
- ☒ Significant weight gain in a short period of time
- ☒ Severe abdominal pain and bloating

Potential side effects of IVF treatment may include:

- ☒ Passing a tiny small amount of clear or blood-colored fluid after the procedure
- ☒ Mild bloating
- ☒ Mild cramping
- ☒ Breast tenderness
- ☒ Constipation

Complications following an egg retrieval are fortunately, very rare. They include:

- ☒ Pelvic infection
- ☒ Vaginal / Ovarian / Pelvic bleeding
- ☒ Injury to internal organs, like the bowel, bladder and major blood vessels
- ☒ Risk of anesthesia

The most common risk of any medicine that induces follicle development for egg production and the transfer of more than one embryo is a multiple pregnancy. Using clomiphene citrate tablets, the risk of a multifetal pregnancy is estimated at 5-10% of pregnancies. This risk increases significantly when a patient uses gonadotropin injectable medication, approximately 15-20% of pregnancies with a 5% risk of triplets. During an IVF cycle, the risk of twins following the transfer of a single blastocyst embryo is 1-2% (due to an embryo diving) but increase to 40-50% when two embryos are transferred.

Although most patients believe IVF increases the multiple pregnancy rate, this is not necessarily accurate. The percentage of multiple births from infertility treatments in this country actually higher with IUI as compared to IVF. The risk can be lower with IVF when responsible decision making and education is applied.

Other rare risks of a fertility treatment cycle includes:

☒ **Ectopic pregnancy** - A potentially life-threatening pregnancy occurring outside the uterus, usually in the fallopian tube. This situation can be treated medically in the early stages but may require surgery if severe. The risk of an ectopic pregnancy is less than 5% of IUI cycles and 1-2% of IVF cycles.

☒ **Ovarian torsion** - An ovary containing cysts can get twisted on its blood supply, possibly requiring surgery. In very rare cases, an ovary must be removed.

☒ **Ovarian hyperstimulation syndrome** - This is a rare but potentially fatal condition resulting from excessive cyst production by the ovaries in response to fertility medication, causing fluid accumulation in the abdomen but, at the same time, severe dehydration. In serious conditions, patients require hospitalization. Fortunately, most cases resolve within one to two weeks.



# Checklist: Preparing for your first IVF appointment

Your first IVF visit will form the building blocks of your fertility journey; it will inform your doctor of where you've been and light the path toward where you are headed. During your initial consultation, you'll meet with your doctor for an extensive evaluation of your medical history so he can begin to outline diagnostic and treatment plans.

Here's what you'll need.

## What to bring

- ☑ Copies of your medical records from:
  - ☑ Your primary healthcare provider
  - ☑ Your OBGYN
  - ☑ Any previous fertility assessments or treatments
- ☑ A list of questions for your doctor
- ☑ A notebook to jot down any instructions or observations
- ☑ Your partner, or not. If you would be more comfortable having your first visit alone that is entirely up to you. Partners are welcome to join you, if you like.



## How to prepare

Your medical records provide crucial information for your infertility specialist, but your own life experience and other factual information also play a key role. Jot down the following to make your first appointment as fruitful as possible:

- ☒ Medications, vitamins, herbs or other supplements you take
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  - ☒ Your OBGYN
  - ☒ Any previous fertility assessments or treatments
  
- ☒ Important medical information such as
  - ☒ Any medical conditions that you or your partner may have
  - ☒ Your age at first menstruation
  - ☒ Details about your cycle: its regularity, average length, the quantity of flow (heavy/light), and if you experience PMS or other painful symptoms
  
- ☒ Your efforts to get pregnant
  - ☒ How long you have trying?
  - ☒ What is your frequency of intercourse?
  - ☒ Bring along any records you've been keeping of basal body temperature, ovulation predictor kit results or fertility charts
  
- ☒ Research infertility in your extended family
  - ☒ Both you and your partner should talk to your relatives to see if they have experienced infertility.
  
- ☒ Verify your infertility insurance coverage with your HR rep at the office and your insurance company



# Is IVF right for me quiz

If you answer "YES" for one or more of the following, IVF might be the right choice for you:

## Questions for Her:

- |   |     |    |
|---|-----|----|
| Have you been unable to become pregnant after one year of trying to conceive?                                   | YES | NO |
| Are you 35-years old or over and been having unprotected intercourse for six months without getting pregnant?   | YES | NO |
| Have you had pelvic infections or contracted any sexually transmitted diseases (STDs)?                          | YES | NO |
| Have you been diagnosed with diminished egg supply and poor egg vitality?                                       | YES | NO |
| Are you a woman 38-years old or older and thinking about becoming pregnant?                                     | YES | NO |
| Have you had severe endometriosis and want to start a family in the future?                                     | YES | NO |
| Have you received a diagnosis for uterine irregularity disorders or structural abnormality?                     | YES | NO |
| Have you experienced multiple miscarriages or chemical pregnancies?   | YES | NO |
| Have you been diagnosed with obstructed fallopian tubes, ovulation disorders, or asymmetrical pelvic alignment? | YES | NO |
| Have you been diagnosed with polycystic ovary syndrome, polycystic ovarian disease or insulin resistance?       | YES | NO |
| Does your menstrual cycle last more than 35 days (from Day 1 of one to the beginning of the following one)?     | YES | NO |
| Do you or have you had cancer, have cancer in your family, and you want to preserve your fertility?             | YES | NO |
| Has your family experienced early menopause (before 45-years old)?  | YES | NO |
| Have you received a diagnosis for having uterine fibroids and want to get pregnant someday?                     | YES | NO |
| Are you a carrier of an inherited genetic disease?  | YES | NO |

# Is IVF right for me quiz

- Have you regularly experienced particularly heavy or uncomfortable menstrual periods? YES NO
- Have you taken Clomid without getting pregnant? YES NO
- Were you ever told that the quality of your eggs was unsatisfactory and you still want to conceive? YES NO
- Have you and your male partner failed to conceive after three to six IUI cycles? YES NO
- Do you or your partner have a family history of inherited birth defects or irregularities that you do not wish to pass on to your child? YES NO
- Do you or your partner carry a genetic mutation for cystic fibrosis, sickle cell, Thalassemia, or other alterations that you do not want to pass along to your child? YES NO

## Questions for Him:

- Have you experienced testicular injury, abnormality, or surgery? YES NO
- Do you have extremely low male sperm count or low mobility? YES NO





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