

# Guide To Fertility Treatments

Learn about common causes of infertility and the types of fertility treatment options available.

Thousands of babies and millions of memories began with a visit to SCRC.



Only a generation ago, patients seeking help with their fertility had a very limited range of options. The causes of infertility were fairly well understood, but treatment was rare, unproven, and hard to access. Over the past few decades the medical community has worked together to come up with innovative new solutions, and today we have a remarkable spectrum of treatments available which have already helped millions of families bring home a healthy baby.

When you are first considering fertility treatment, that wide range of options is a source of great hope.

### **It can also be confusing.**

This new world of complex protocols, procedures and medical terminology is bewildering for many patients. At this stage, a little bit of information can go a long way. A quick overview of common causes of infertility, and the types of treatments used to address these challenges is a great beginning.





# Common Fertility Problems

Which fertility treatment you may need will depend on the diagnosed or suspected root cause of infertility. Each patient and case is unique, so it is impossible to cover every possible situation, but there are a handful of common fertility problems which affect millions of people.



## In Women

The most common fertility issues we see in women tend to fall under the following three categories:

### Ovulation problems

If a woman is not ovulating regularly on her own, getting pregnant can be very difficult. She may be anovulatory (meaning that is not ovulating at all). Her cycles may be irregular for a number of reasons. It may be that her eggs are either not maturing properly within the ovaries, or are not being released (these problems are common with Polycystic Ovarian Syndrome, or PCOS). Some women, especially as they grow older, may have issues with low ovarian reserve or poor egg quality.

### Blocked fallopian tubes

During healthy ovulation, the released egg travels down the fallopian tubes towards the uterus: pregnancy occurs when it joins up with a sperm along the way. Even if you are ovulating regularly, a problem with your fallopian tubes can prevent that meeting from happening.

Fallopian tube damage or blockages can happen due to scarring from a previous pelvic infection (which may have had no symptoms at the time) or due to endometriosis, where the tissue that normally grows within the uterus grows in other places within the pelvis. These growths, known as adhesions, can interfere with the healthy functioning of the ovaries and fallopian tubes.

### Cervix or uterus issues

Problems with the cervix or uterus can make it hard to conceive, or may lead to recurrent pregnancy loss. In some cases a woman's cervical mucus may contain abnormalities or antibodies which may kill sperm or prevent them from moving the way that they should. Injuries to the uterus which may have damaged the uterine lining or deformities of the uterus or cervix (which may have been present from birth) can make it difficult for some women to sustain a pregnancy.





## In Men

Male-factor infertility is very common, and usually very treatable. The most common men's fertility issues that we see are:

### **Low sperm count**

Some men produce less sperm in their semen. This is also known as oligospermia. Exactly what causes a low sperm count can vary widely, but as long as some healthy sperm are produced, this is a very treatable issue.

### **Poor sperm movement or morphology**

There are main factors which determine the quality of sperm. Sperm motility is how well the sperm can move. If sperm suffers from poor motility, it may have trouble traveling through a woman's body to meet an egg. Sperm morphology is the percentage of sperm which have a normal shape.

### **Blocked ducts**

Sometimes the ducts which release semen may be partially or completely blocked, causing low sperm counts or the total absence of sperm (also known as aspermia). Ejaculatory duct obstruction (EDO) may be caused by an injury or infection, or it may be a congenital issue which has been present since birth.

With so many potential factors affecting fertility, knowing when to look for help can be difficult. Most of us assume that when we are ready for parenthood it will happen naturally; those expectations are built into our culture and are reflected in the type of "advice" many couples get from well-meaning relatives and friends: to relax, be patient, and let nature take its course. If you have been trying to get pregnant for some time without success, this type of advice isn't helpful. The fact is, most infertility challenges have medical solutions.



# When To Seek Fertility Treatment

## Problems conceiving

The general guideline is that if an otherwise healthy couple has been trying to conceive naturally for a year or more without a positive result, it's probably time to check in with a doctor.

If the female partner is over 35, the guideline is six months.

If you are hoping to conceive but have a complex medical history, you may want to seek out a fertility consultation even before you begin trying, especially if you have any of the following factors:

- History of irregular menstrual periods or total absence of periods
- History of pelvic inflammatory disease (PID)
- Other sexually transmitted infections
- History of ectopic pregnancy
- History of gynecological or abdominal surgery
- Known structural defects of the uterus or other reproductive organs
- Hormone (endocrine) disorders such as hypo or hyperthyroidism
- Pituitary tumors or hyperprolactinemia



### Same sex couple

Same sex female couples often seek out fertility treatments to create their families. They may wish to use donor sperm for intrauterine insemination (IUI) to achieve pregnancy, or in vitro fertilization (IVF) using eggs from one partner and donor sperm to create embryos which will be carried by the other partner (this is sometimes referred to as reciprocal IVF).

Male same sex partners may wish to explore the possibility using donor eggs, IVF and a gestational surrogate to bring a baby into their lives.

### Single woman/man

Individuals who are ready for parenthood but don't currently have a partner can use fertility treatment options to welcome a child into the world on their terms and timeframe. Many single women use donor sperm along with IUI or IVF. Prospective single fathers have the option of donor eggs and surrogate pregnancy.

### Genetic conditions

If you know that you carry the genes for a serious inheritable condition, the prospect of parenthood can be full of terrible uncertainty. IVF, along with sophisticated genetic screening techniques such as preimplantation genetic diagnosis (PGD) can offer peace of mind by ensuring that only healthy embryos are transferred.

### Fertility preservation

Some people know for sure that they want to be parents, but the timing isn't right. Other patients are facing cancer treatment or other fertility-limiting or destroying medical procedures. In these cases, reproductive technologies can preserve fertility until they are ready to have a baby. Sperm, eggs, and embryos can be frozen using special cryogenic techniques.





# Types Of Fertility Treatments

The term “fertility treatment” is a big umbrella covering a wide range of treatments, interventions, and procedures. It may help to break them down into three basic categories.



## Medical Fertility Treatments

Medical fertility treatments are minimally invasive interventions which are the “first stop” for several common fertility issues. Common treatments include:

### Fertility drugs

These drugs may be taken orally or injected, and may be used alone or together with treatments such as IUI or IVF. The most common fertility drug is Clomid (clomiphene citrate). It works by triggering the production and release of fertility hormones in your body: GnRH (gonadotropin releasing hormone), FSH (follicle stimulating hormone) and LH (luteinizing hormone). These hormones in turn stimulate your ovaries to release a mature egg on a predictable schedule.

If your infertility is caused by:

- an issue with your pituitary gland
- a very irregular cycle where ovulation is completely unpredictable
- your ovaries not producing eggs normally

a course of fertility drugs could help you to conceive.

For women whose infertility is caused by a failure to ovulate naturally, Clomid therapy raises the chance of pregnancy to about 20% per cycle, which is about the same as a woman without ovulation problems. Nearly 70% of these women are successful in achieving pregnancy over the course of six cycles. Most women who are going to be successful with Clomid conceive in the first three cycles, but the success rate drops sharply after six cycles. There are some risks associated with Clomid: your chances of a multiple pregnancy increase by about 10%, and some women have side effects.

"We practice differently today than we used to, in that we analyze embryos much more thoroughly than we used to. By doing so, we negate the part that 'more is better.'"

Dr. Mark Surrey  
*Glamour*



## Fertility surgery

### Intrauterine insemination (IUI)

In IUI, a sperm sample is carefully "washed" and treated so that only the healthiest and most active sperm remain. Then, a tiny catheter is passed through the woman's cervix and into her uterus so that the sperm can be placed directly into the uterus to aid conception. It may be timed with a woman's natural ovulation cycle, or used in conjunction with a fertility drug like Clomid. IUI is often indicated when donor sperm is being used or when infertility is caused by:

- low sperm count or motility
- problems with cervical mucus
- mild endometriosis

Exactly how effective IUI is depends on several factors, including the original sperm count and quality, whether it is being used together with Clomid, and the timing.

Artificial insemination is sometimes used as another name for IUI, but it may also refer to any time sperm is placed into the female reproductive tract (vagina, cervix, or uterus) whether or not there has been any pre-treatment of the sperm sample.

The next category of fertility treatments are the surgical options. These are usually indicated when infertility is caused by a structural problem with the reproductive systems of either the female or male partner. There are many different types of fertility surgery, but these are the most common:

### For Women

#### Removal of fibroid tumors (myomectomy)

While some fibroids can be treated (shrunk) with medication, that treatment takes a long time. If large fibroid tumors are thought to be affecting your fertility or causing miscarriage, surgical removal may be the best option, either through laparoscopy or an open incision. The removal of significant fibroids can cause scars in your uterus, which could mean that you should have a C-section to deliver your future baby.





"Fibroids may block the path of sperm entering your cervix. Or they might 'pinch your fallopian tubes, altering the ability of the fallopian tube to catch the egg,' says Dr. Alexander."

Dr. Carolyn Alexander  
*Refinery29*



#### Unblocking fallopian tubes (salpingostomy, performed through laparoscopy or incision)

Depending on the type of blockage, a surgeon may be able to open the blocked outer end of the tube.

#### Freeing adhesions (laparoscopy)

Your ovaries or other parts of your reproductive tract may have scarring or adhesions from previous inflammation. This can be caused by Pelvic Inflammatory Disease or other infections. These adhesions can prevent eggs from leaving the ovaries, preventing pregnancy.

#### Treatment of mild endometriosis (electrodiathermy or microsurgery)

Endometriosis can leave small deposits in your ovaries or pelvic ligaments and cavity. If they are found during a diagnostic laparoscopy, they may be removed then and there with heat (electrodiathermy). If you have more extensive endometriosis, you may be scheduled for another surgery to remove any deposits, cysts, or polyps.

#### Treatment of polycystic ovarian syndrome (PCOS) (electrodiathermy)

In PCOS, the extra follicles your ovaries produce can raise the level of male hormones in your body to a level that interferes with your fertility. In this surgery, heat is used to destroy the excess follicles, which should help to regulate your hormones. It is an alternative to fertility drugs which doesn't increase your risk of multiple births.

#### Reversal of tubal ligation (microsurgery)

Some types of female sterilization ("tube tying") are surgically reversible. Depending on the technique used in the original procedure, and how much healthy tube remains, the surgeon may be able to rejoin the two sections of tube, making pregnancy possible again in up to 70% of cases.

## Assisted Reproductive Technologies (ART)

### For Men

#### Vasectomy reversal

Depending on how the original vasectomy was performed, it is usually possible for a surgeon to reconnect the tubes (vans). The surgery is usually a day procedure performed under spinal or general anesthesia, but with no overnight hospital stay. Successful vasectomy reversals performed within 10 years of the vasectomy lead to pregnancy rates of more than 50%. Pregnancy is most likely to occur in the first 3 years after the reversal.

#### Varicocele repair

A varicocele is a large varicose vein which forms in the scrotum and may impair a man's fertility. It can be repaired surgically in an outpatient procedure. Repairing a varicocele is thought to improve the environment for sperm, which may help with sperm count, mobility, and motility. The effectiveness of this surgery has not been conclusively proven.

The third category of fertility treatments are the assisted reproductive technologies, also known as ART. For many patients with a wide range of fertility problems, ART treatments used alone or in combination may represent their best chance of pregnancy.

#### Fertility preservation technologies

The freezing of gametes (eggs and sperm) and embryos to preserve them at a very high quality is possible thanks to cutting-edge cryogenic technologies. Sperm samples are collected and then washed and flash-frozen in the lab to be stored for future use. If you plan to freeze eggs or embryos produced from your own eggs, you will first undergo a cycle of fertility drugs to stimulate your ovaries. Once the eggs have matured, they will be retrieved in a minor outpatient procedure, performed in the clinic under sedation, before being frozen and stored. With modern freezing and storage methods, gametes and embryos may be stored for up to 10 years without significant loss of quality.



"The largest group of women who should go see the fertility specialist are those that are under 35 years of age. These women need to make sure everything is gynecologically normal as well as to make sure they are having regular cycles."

Dr. Hal Danzer  
*mindbodygreen*



## In vitro fertilization (IVF)

In vitro fertilization is a highly effective treatment for many forms of infertility. There are several distinct stages to IVF: rather than a single procedure, it is a series of treatments which takes place over a period of 4 to 6 weeks. In an average IVF cycle there are four main steps:

1. You will be given fertility drugs to suppress your natural subject and stimulate ovulation.
2. After careful monitoring, the mature eggs will be retrieved from your ovaries in an outpatient procedure performed under sedation.
3. The eggs will be combined with a partner or donor's sperm in the lab to create embryos, which are then incubated for 2 to 5 days.
4. The doctor will transfer the embryos into your uterus.

IVF is often indicated:

- when the cause of infertility is unknown
- when the fallopian tubes are damaged or blocked, as an alternative to surgery
- after a tubal ligation, as an alternative to surgical repair
- for patients with Polycystic Ovarian Syndrome (PCOS)
- for patients with endometriosis
- when ovulation problems mean that there are fewer eggs available for fertilization
- when sperm count and/or quality is low
- when donor eggs and/or sperm are being used
- when genetic screening tests are required
- when fertility has been previous preserved through the freezing of eggs, sperm, or embryos
- when other fertility treatments have been unsuccessful

The success rates for IVF vary widely depending on the original diagnosis and age profile of the patient, and many other factors including the experience and training of the doctors and embryologists. The independent Society for Assisted Reproductive Technology [www.sart.org](http://www.sart.org) allows you to investigate the individual success rates of clinics in your area.

There are supplemental technologies which can help improve the chances of pregnancy for an IVF cycle, depending on the patient.

#### Intracytoplasmic sperm injection (ICSI):

During ICSI, individual high-quality sperm cells are injected right into individual mature eggs in order to achieve fertilization. If a man has an extremely low sperm count, or is unable to ejaculate, a physician may be able to retrieve sperm from inside his body, using one of three techniques.

- percutaneous epididymal sperm aspiration (PESA)
- testicular sperm aspiration (TESA)
- testicular sperm extraction (TESE)

When dealing with severe male-factor infertility, ICSI is the most effective treatment available.

#### Blastocyst transfer:

Advanced embryo culturing methods make it possible to wait until the cultured embryos have reached the blastocyst stage (5 to 6 days after fertilization) before transferring them to the uterus. This improves implantation rates.

#### Assisted hatching:

Very early stage embryos are covered by a very thin membrane called the zona pellicuda. Before implantation can happen, the embryo must “hatch” out of this membrane. Assisted hatching is a cutting edge technique where an embryologist, working under a microscope, makes a tiny hole in the zona pellicuda before transfer. For patients with poor prognosis whose embryos may lack the energy to break through the membrane on their own, assisted hatching may improve their chances of implantation success.

#### Preimplantation genetic screening (PGS) and diagnosis (PGD):

These genetic tests can help you ensure that only healthy embryos are transferred. PGS screens embryos for aneuploidy (missing or extra chromosomes) which is a leading cause of miscarriage. PGD is used to identify genetic diseases caused by single-gene disorders or the presence of chromosomal translocations. For patients who are worried about the genetic risk of Cystic Fibrosis, Tay Sachs, Fragile X and other serious disorders, PGD can offer hope.

### Preconception sex selection:

The same technology used in PGD can be used to identify the sex of embryos before transfer. For parents who already have one or more children, this can be a wonderful way to balance their family.

### Donor eggs, sperm, or embryos:

For patients dealing with low quality eggs, sperm, or both, donor eggs or sperm, or embryo adoption can revolutionize their chances of IVF success. For many same sex couples and prospective single parents, these options can help to make IVF possible.

### Surrogacy:

Surrogacy is when another woman, known as surrogate, carries a baby to term for its intended parents. Sometimes the surrogate also donates the egg for the pregnancy (known as a traditional surrogate) and sometimes egg and/or sperm from the couple or other donors are used (known as a gestational surrogate.) The use of a surrogate is a now routine practice in many different scenarios.

- A chance to have a baby even if other ART methods have failed
- An opportunity for a genetic link with your baby
- Relief from the rigors of fertility treatment

Surrogacy is one of the most effective assisted reproductive treatments available, especially for patients who have exhausted all other treatments.

For gay couples, or for patients who are physically incapable of carrying a pregnancy to term themselves due to hysterectomy, repeated miscarriages or health conditions, surrogacy offers hope. You may still have a chance to have a baby who is biologically related to you if at least one partner is able to produce eggs or sperm.

Many patients struggle with the demands of repeated IVF cycles, physically, mentally, and emotionally. If the side effects are particularly severe, choosing to use a surrogate can be a powerful act of self-care on the journey to bringing home your baby.

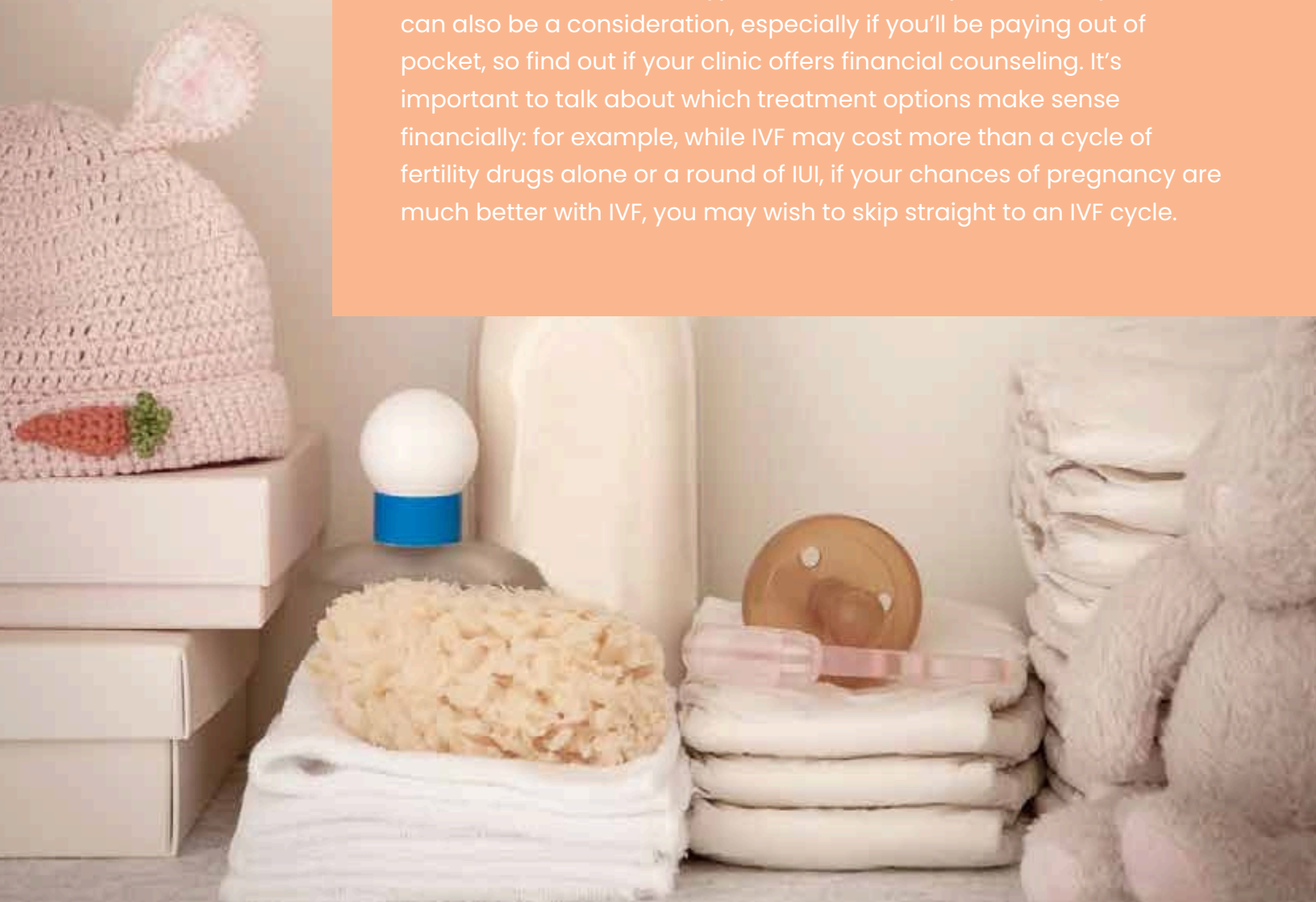
There are a number of reasons to choose surrogacy: it is not necessarily a "last resort" option. Thousands of babies are born with the selfless gift of a surrogate each year, and surrogacy has become a normal part of the fertility treatment toolkit.



# Choosing The Right Treatment

**Finding the treatment you need will be a very individual process.**

A thorough fertility screening and consultation with your doctor will help you decide which options to try. The type of fertility problem you're dealing with will be the first factor in that decision, along with the success rate of each type of treatment for patients like you. Cost can also be a consideration, especially if you'll be paying out of pocket, so find out if your clinic offers financial counseling. It's important to talk about which treatment options make sense financially: for example, while IVF may cost more than a cycle of fertility drugs alone or a round of IUI, if your chances of pregnancy are much better with IVF, you may wish to skip straight to an IVF cycle.





# Why choose SCRC?

Your fertility team will be partners in this journey, and you need assurance that they have the commitment, knowledge, qualifications, and technology to help you find the answers and solutions you need. Fertility patients come to SCRC for many different reasons, but they all have one thing in common: a deep desire to add a child to their family.

## Our Team

The SCRC team consists of reproductive endocrinologists and embryologists practicing at the top of their field, along with a dedicated staff of highly trained nurses and technicians. All of our doctors hold multiple board certifications, and are recognized as thought leaders in the field for their research and innovation.



## Our Facilities

Our two state-of-the-art ART laboratories, ART Beverly Hills and ART Santa Barbara, are overseen by a board certified doctoral scientist as laboratory director, ensuring the highest levels of quality control and assurance possible, and are outfitted with the most advanced reproductive technology, instruments, and equipment available. Examples include the Embryoscope® time lapse imaging system, the most sophisticated instrument of its kind, and the LYKOS Multi-pulse laser for assisted hatching, the most advanced methodology available for safe performance of assisted hatching or zona opening. We have made lab air quality a top priority, as even minute amounts of air contaminants can have serious consequences to the health and outcomes of developing embryos. To that end, we have outfitted both labs with extensive and redundant filtration systems, beyond the level seen in other fertility clinics.

## Our Reputation

We have earned an international reputation for excellence through years of success for our patients, and our dedication to the cause of fertility medicine can be seen in the publication of ground-breaking fertility research in peer-reviewed medical journals by our doctors and researchers. We are committed to transparency and the education and empowerment of our patients and the public, and are regularly featured on television shows and in magazines, sharing the knowledge we've gained in our decades of research and practice.





# Pregnancy Is Possible.

Ready to meet with a fertility specialist  
to learn about your options?

Schedule A Consultation  
**310-277-2393**

