Fertivitro

Center for Human Reproduction

FERTIVITRO
Centro de Reprodução Humana

São Paulo, Brazil
fertivitro.com.br

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ABOUT FERTIVITRO

Our role in the reproductive medicine date from March 2002 when a group of experts decided to pursue their passion for embryology and assisted human reproduction areas to create a center to offer modern fertility services with all the technology currently available for truly individualized care and customized treatments.

We chose the name Fertivitro in reference to one of the upmost techniques at the time, in vitro fertilization (IVF). Our logo was inspired by the lotus flower with a stem in the shape of a sperm to represent the fertility and the beginning of human creation.

Fertivitro also has an IVF lab with the state-of-the-art technology which is reference in high quality and safety by the Brazilian Health Regulatory Agency (Anvisa) and received the golden certification by the Latin America Network of Assisted Reproduction (REDLARA) in 2020 and 2022.

Our team has deep knowledge and experience in assisted reproduction treatments and all patients without age limits or other restrictions are very welcome at Fertivitro. We also have an assistance program to offer financial aid for low-income people in Brazil.

Our goal is to help you to build your family and make your dream come true.
Welcome to Fertivitro!

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INFERTILITY

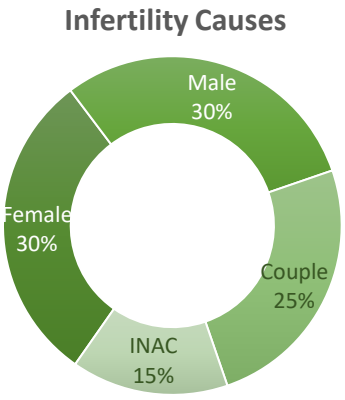
The definition of infertility is the inability of a couple to become pregnant after one year trying when having frequent sexual intercourse without contraceptive methods.

A couple with an active sexual life has a one out of five chance to conceive each month (20%). This means that eight out of ten couples (80%), when trying to have a baby, will get pregnant within one-year period. However, the other 20% will present some difficulty to conceive through natural ways, and at least half of them will need to resort to assisted human reproduction treatments.

According to the World Health Organization (WHO), infertility is a disease that affects 15 to 20% of the population in reproductive age.

First, a couple that could not become pregnant after one year must consult a doctor to get a diagnosis about the infertility factors and the recommendation of the best assisted treatment to become pregnant. When the woman is more than 35 years old, this time is reduced to six months.

It is a mistaken to think that the infertility problem is always related to the woman when in fact we know that currently around 30% are female causes, 30% are male causes, and 25% are both from male and female causes.



However, it is not possible to find a conclusion regarding the diagnosis of infertility in around 15% of the couples, even after all the analysis results. These cases are classified as sterility or infertility of no apparent cause (INAC or SNAC).

Thus, it is necessary that both partners take part in the investigation process to reach an individualized diagnosis and the recommendation of the most appropriate assisted reproduction treatment.

Female Infertility

Every month, the woman's body prepares itself to get pregnant when a group of follicles – rounded structures filled with liquid where the eggs develop and mature – are activated by the ovaries.

To successfully complete the eggs' development and mature processes it is necessary the production of many hormones like FSH (Follicle Stimulating Hormone) and LH (Luteinizing Hormone), both produced by the pituitary gland, and estradiol produced by the ovaries.

FSH and LH are responsible for the development of the eggs, while at the same time estradiol is produced by the ovaries aiming to ticker the endometrium – the inner layer of the uterus – to prepare it for pregnancy.

Although there is the possibility that many follicles might grow, only one will reach a bigger size and will break in the moment of ovulation during a natural menstrual cycle, which means that only one egg will be released by the ovary to be fertilized in most cases. LH is the hormone responsible for breaking the follicle to release the egg.

The follicles' remains is now a corpus luteum and it will produce estradiol and progesterone hormones for the beginning of the pregnancy.

While estradiol will help to thicken the endometrium to receive the embryo, progesterone will stimulate the developing and secretion of the endometrium glands. Both hormones are important nutrition sources for the first days of pregnancy.

The implanted embryo produces a hormone called hCG (Human Chorionic Gonadotrophin) that keeps the corpus luteum active for around three months until the placenta is completely developed and producing its own necessary hormones for the pregnancy to go on.

In case of no pregnancy, the corpus luteum will regress itself, also the levels of estradiol and progesterone will decrease, and because of the hormone levels drop the endometrium will shed and lead to the beginning of the menstrual cycle. This cycle is repeated every month during the reproductive life of a woman.

During the infertility evaluation process, the specialist can ask for diagnostic tests to assess the basic ovarian reserve and function, fallopian tube's permeability, to rule out certain medical conditions and sexually transmitted disease, blood tests to check the hormone levels, and to ensure that the uterine cavity is normal.

When a couple could not become pregnant during one-year period the causes of female infertility may be associated with the following factors.

Advanced Age

Nowadays, women have been postponing getting pregnant more and more.

However, woman's age is one of the main factors that determine the reproductive success of a couple. Women are already born with a limited number of eggs, which will grow old along with them. And besides that, while the eggs are resting in the ovaries, every month a few eggs move from resting to active state, and after the eggs commit to the maturation process, they either achieve successful ovulation or they die.

This means that after 35 years old, a woman has fewer eggs, and their quality begins to decline.

As a result, the chance of a successful pregnancy decreases each year specially after the age of 40 and the rate of miscarriage increases due to the number of embryos with chromosomal abnormalities (aneuploidy).

Even though to get pregnant after 40 years old could be a challenge, even with the most advanced assisted reproduction treatments, it is still possible to increase the pregnancy rate with in vitro fertilization (IVF) with donated eggs.

Tuboperitoneal Factor

A natural fertilization occurs when egg and sperm meet inside of the fallopian tubes. Damages or blockages in the fallopian tubes can affect their mobility and the egg collection after the ovulation, reducing the chances to achieve a pregnancy naturally.

If you have not been succeeded in get pregnant it is very important to evaluate the structure and function of the fallopian tubes.

The most common causes for tubal diseases are pelvic infections (salpingitis) caused by sexually transmitted diseases, and noninfectious which the most common is endometriosis (presence of endometrial tissue outside of the uterine cavity) and the least common are lesions caused by pelvic surgeries that include patients that had tubal ligation.

According to the type of the blockage and the woman's age, different types of techniques can be suggested to treat female infertility. One of them is the in vitro fertilization (IVF), where the permeability of the tubes is not anymore necessary once eggs are collected and then fertilized in the laboratory.

Uterine Factor

The uterus is essential for the reproductive process because it is responsible for transporting the sperm to the fallopian tubes and it is inside it that implantation takes place (when the embryo fixes itself in the uterus) and it is where the fetus develops.

Structural abnormalities of the uterus can occur inside the uterus per se, as well as inside the endometrium.

The uterus can present congenital uterine anomalies (changes in the uterus anatomy during its development), tumors (myomas are the most frequent) and adherences or synachiae, that can alter the uterine cavity.

There are four types of congenital uterine anomalies that can interfere in the pregnancy process: bicornuate uterus (heart-shaped uterus) that could limit the fetus development and increase the risk of a miscarriage; unicornuate uterus (one-sided uterus) that has half of an uterus normal size and one fallopian tube and can reduce the chances of pregnancy; septate uterus (uterus with partition in the middle) with a reduced space for the pregnancy development; and uterus didelphys (double uterus) which eventually can be too small to allow the pregnancy to go on.

Changes in the endometrium anatomy like polyps could not allow the embryo implantation and according to their size and location should be removed.

Myomas are benign tumors in the uterine muscular tissue that in a short number of cases could lead to infertility according to its size and location. Myomas can also modify the structure of the uterus and lead to an obstruction of the uterine fallopian tubes, as well as occupy a space inside the uterine cavity what makes the implantation and development of pregnancy harder. Women with myomas may present difficulties to get pregnant or have repeated miscarriages.

Adherences or synechiae like endometriosis – a condition where a tissue that is like the endometrium grows outside of the uterus – can affect the permeability and mobility of the fallopian tubes, resulting in infertility.

Ovarian Factor

Ovulatory dysfunction can be identified by hormone testing during the menstrual cycle to check woman's ovarian aging (FSH, LH and estradiol hormones) and ovulation evaluation (prolactin and progesterone hormones).

It is also necessary to do a Transvaginal Ultrasound scan to verify the presence of "the" egg – a developed mature egg ready to be ovulated – and to measure the endometrium during the woman's menstrual cycle.

During the infertility diagnosis period, the doctor will point out the exact days of the cycle to do each analysis. The hormone testing results will indicate if the patient is ovulating or not.

The main causes of ovulatory dysfunction are premature ovarian aging (POA), hyperprolactinemia (high levels of prolactin) and hormone level changes, like hypothalamic-pituitary dysfunction, Polycystic Ovary Syndrome (PCOS) and hypothyroidism.

Immunological Factor

Pregnancy is a particular condition from the immunological point of view, since the embryo has half of its characteristics derived from the father, which is an unfamiliar organism.

For this reason, it is essential that the maternal body's immune system recognizes the embryo as its own and at the same time, accept its growth until birth, instead of being misdirected and attacks the very embryo that should be protected.

Sometimes, autoimmune diseases, even though the ones that does not lead to any type of problem out of the pregnancy period, can affect fertility, the success of a pregnancy and miscarriage risk.

There are many ways to evaluate the immune system function in these cases, with different types of treatment.

Many theories have been proposed to explain the process in which the maternal organism does not reject the embryo. Among them the production of antibody blockers that protect the embryo and at the same time control and balance the activities of defense cells in the immune system.

Cervical Factor (Uterine Cervix)

The cervical canal produces a transparent secretion very similar to egg whites called cervical mucus, during the period before ovulation.

After the sexual intercourse, the cervical mucus is responsible for transporting the sperm or spermatozoa to the fallopian tubes to meet and fertilize the egg. However, in some cases the self-defense cells of the female reproductive system could suffer an immunological reaction, called of hostile mucus, and kill the sperm while they travel through the cervical canal.

The cervical factor is evaluated through a Post Coital Test (PCT) analysis which consists in collecting the cervical mucus and the vaginal secretion four to twelve hours after sexual intercourse to evaluate the sperm quantity and motility. It is important to note that the PCT analysis must be done before the ovulation period.

When we cannot find sperm or only sperm with no motility in the results, it is possible the existence of an immunological or genetic factor. In these cases, the doctor will ask for a semen analysis to confirm the diagnosis.

Male Infertility

Male infertility is usually connected to the sperm production or sperm motility.
There are many reasons that could lead the testicles to not produce or produce few sperm.

Some reasons are genetic diseases, sperm structural abnormalities, infections, external or surgical trauma, high level of male hormones, diabetes, hypothyroidism, and obesity could affect the sperm production leading to infertility.

Moreover, an unhealthy lifestyle and even the use of illicit drugs such as steroids, can affect male fertility and reproductive potential.

It is important to stress that when a couple could not get pregnant naturally, male infertility factors represent the same percentage of female factors (30%) and in 25% of the infertility cases we can find both male and female factors.

Many times, men are misled to believe that male infertility is connected to impotence when in fact infertility is a disease that can be treated and help men to become fathers.

To investigate male infertility, the specialist can request a semen analysis with Kruger morphology to evaluate sperm count, motility and morphology, and a sperm culture test. Therefore, the doctor will investigate certain medical conditions and the possibility of sexually transmitted disease.

When a couple could not become pregnant during one-year period the causes of male infertility may be associated with the following factors.

Hyperthermia

Excessive heat exposure can affect the sperm production process. Testicles temperature changes can happen due to diseases as varicocele or been related to repeated habits and work style as hiding a bicycle for long hours or work in places with high temperatures.

Thus, a persistent heat exposure can increase the testicles temperature (hyperthermia) and reduce the sperm motility which affects its capacity to reach the fallopian tubes to meet and fertilize the egg.

Varicocele

It is a condition (like varicose veins) where the veins of the testicles are larger than normal, causing them to overheat and as a result can decrease the quality, quantity, and shape of the sperm.

Varicoceles affect up to 15% of all young men, it often starts during puberty and in most of the cases is asymptomatic. Men that already have children are diagnosed with varicocele is 80% of the cases.

Only after a routine physical exam and a specialized ultrasound it is possible to diagnosis the extension of the varicocele, and a minimally invasive surgery could be recommended if a couple is having problems to get pregnant.

Low Sperm Count (Oligospermia)

Oligospermia is a condition when man presents a low sperm count which means less than 15 million sperm per milliliter. The infertility could be temporary or permanent and, in these cases, we recommend an appointment with a specialist to examine male fertility factors and medical history.

Many factors can lower sperm production like male advanced age, infections, trauma in the genital area, genetics, lifestyle, hormones, varicocele, among others.

Treatment options vary depending on the cause of the condition. For low sperm count due to infections antibiotics can be prescribed and when the cause is varicocele surgery is the most common treatment.

When a man diagnosed with oligospermia wishes to become a father in the future we recommend preserving his fertility with the sperm cryopreservation technique.

When a couple is trying to get pregnant, assisted reproduction treatments can be used to facilitate conception such as intrauterine insemination (IUI), in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI). The specialist will recommend the best treatment option according to male and female factors diagnosed.

No Sperm Count (Azoospermia)

Azoospermia is a condition in which the man has no sperm in the ejaculate, and it can be divided in two types.

The first type is called obstructive azoospermia, a blockage in the genitalia caused by vasectomy, epididymis or vas deferens abnormalities, previous surgeries, or other blockages in the reproductive tract.

And the second type is called nonobstructive azoospermia which means that there is no sperm production due to hormone imbalances, genetics, and many testicular causes.

As part of the diagnosis, it is necessary a physical exam, a sperm and hormone analysis, and a genetic testing. The treatment of azoospermia will depend on the cause. For example, if you are diagnosed with obstructive azoospermia, a surgery to unblock tubes could be recommended, and if you are diagnosed with hormone imbalances, you may be given hormone treatments.

When the patient doesn't have sperm or has a low living count, they can be retrieved from the testicles or epididymis for assisted pregnancy treatments such as intracytoplasmic sperm injection (ICSI) – the injection of one sperm into one egg in the laboratory.

Y Chromosome Microdeletions

Y chromosome is related to sperm production which means that losses of small fragments of the Y chromosome can affect the sperm production and cause male infertility.

A genetic study of the microdeletions can identify where is the loss and according to the results it is possible to find normal sperms from the testicles or epididymis.

Male infertility caused by Y chromosome microdeletions can be treated with the intracytoplasmic sperm injection (ICSI) technique and it is indicated to perform a preimplantation genetic testing for aneuploidies to select chromosomally normal embryos for transfer.

ASSISTED REPRODUCTION TREATMENTS

A summary of the main treatments offered by Fertivitro.

LOW COMPLEXITY

Many couples with simple infertility factors can benefit from low complexity treatments of assisted reproduction to get pregnant, like programmed intercourse and intrauterine insemination (IUI). In both treatments, the fertilization takes place naturally within the fallopian tubes.

Programmed Intercourse (Timed Intercourse)

It is a simple and low risk assisted treatment recommended to young couple diagnosed with ovulation dysfunction or infertility of no apparent cause (INAC).

During the investigation process, it is important to be sure that there are no damage or blockage in the fallopian tubes, and no factors that could reduce sperm production and motility that could compromise the success of the treatment.

The treatment must be followed up by a gynecologist specialist in assisted reproduction that will implement a medication plan to induce ovulation and will monitor the ovaries response through ultrasound scans. The doctor will determine the best days for the couple to have intercourse, which must coincide with ovulation period, to increase the chances to get pregnant.

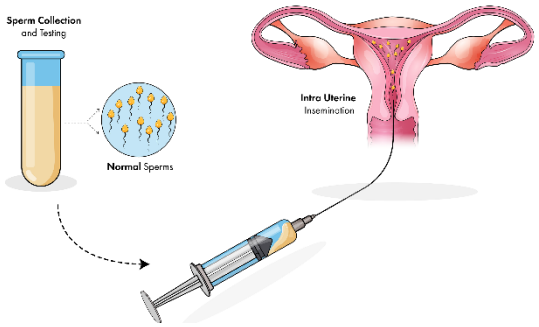
Intrauterine Insemination (IUI)

Intrauterine insemination is a simple and low-cost treatment that can be recommended to couples with associated or non-associated male and female infertility factors like endometriosis, hostile cervical mucus, low sperm motility and infertility of no apparent cause (INAC). The treatment can also help single women and same-sex female couples to having a baby.

It is important to evaluate the woman's age since the quality of eggs is a relevant factor to the success of this treatment, as after 35 years old the eggs quality begins to decline.

The IUI process starts with a medication plan to stimulate the ovaries activity and the doctor will monitor the ovaries response through ultrasound scans and blood tests to check the woman's hormone levels.

When a follicle reaches a size around 18 millimeters, the doctor will prescribe an injection to induce the ovulation that is expected to happen about 36 hours later.



The next step is to collect and prepare the sperm sample in the lab. After that the sperm goes directly into woman's uterus through a flexible thin catheter to shorten the way between sperm and egg meeting.

Statistically, the pregnancy rates after performing uterine insemination treatment are about 15 to 20%. After three consecutive cycles without getting pregnant, it is recommended to move to high complexity treatments like in vitro fertilization (IVF).

HIGH COMPLEXITY

The high complexity assisted reproduction techniques like in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI) can be recommended to help couples with severe infertility factors and couples that cannot get pregnant naturally like same-sex male couples.

These fertility treatments involve surgically removing eggs from a woman's ovaries and fertilize them with sperm, and develop embryos in the IVF lab, among other procedures.

In Vitro Fertilization (IVF)

IVF is an assisted reproduction fertility treatment where eggs and sperm are combined in the laboratory to create embryos, and after a short cultivation period, the embryos are transferred into the uterus.

This treatment can be recommended to help couple with infertility, single parenting and LGBTQIA+ couples to get pregnant. IVF is also the treatment recommended when the patients need egg or sperm donor, or both.

Regarding to infertility factors, IVF can help in cases of lack or blockage of the fallopian tubes, failure of tubal re-ligation surgery, endometriosis, low count or motility sperm, failure of insemination attempts, ovarian failure, and advanced age.

Intracytoplasmic Sperm Injection (ICSI)

It is the most advanced assisted reproductive technology (ART) to treat couples with severe male infertility where a single sperm cell is isolated and injected into a mature egg using microsurgical instruments to create an embryo.

ICSI is usually recommended to treat problems related to low sperm count (oligospermia), no sperm count (azoospermia), Y chromosome microdeletions and vasectomy. This assisted technique is also applied when using frozen eggs.

In these cases, sperm often can be retrieved from the epididymis or the testicles by a minor outpatient procedure and then used to fertilize the egg at the IVF lab.

Differences between IVF and ICSI Procedures

Both assisted reproduction techniques can help people to get pregnant, but the way that the sperm fertilize the egg in the lab is different. For a better understanding, please check the IVF and ICSI treatments step by step procedures below:

1) Ovarian stimulation

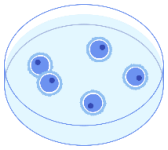
It starts with the woman's menstrual cycle when the specialist will choose an individualized medication plan according to each case to stimulate the development of the follicles where the eggs are resting. A group of eggs will move from resting to active state and committee to maturation process in the ovaries. During this period, the doctor will monitor the ovaries response through ultrasound scans until the follicles reach a size around 18 millimeters. Then the doctor will prescribe an injection to induce the ovulation followed by egg retrieval about 36 hours later.

2) Egg retrieval

This is when the eggs are harvested from the ovaries, and it is an ultrasound guided procedure which is performed under anesthesia at the IVF clinic. It takes about 20 minutes and after the procedure patient must rest until be recovered from the anesthesia. Fertivitro' surgical center offers a safe environment following all the Brazilian main sanitary criteria.

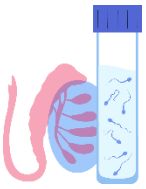
3) Egg selection

During the egg retrieval procedure, the embryologist will evaluate each harvested egg to confirm the integrity and maturation of the female egg cell and select the ones that will be fertilized in the laboratory.



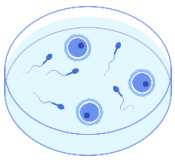
4) Sperm collection and testing

For IVF treatment, sperm sample will be collected through masturbation. In cases of severe male infertility for ICSI treatment or when recommended by the specialist, sperm cells will be harvested from the epididymis or testicles. After the sperm collection, the sample will be prepared in the lab to select the ones to fertilize the eggs.

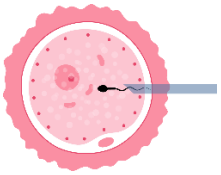


5) IVF x ICSI fertilization

For IVF treatment, sperm and eggs will be joined in a petri dish to complete the fertilization process by their own, followed by embryo development. On the other way, for ICSI treatment, the embryologist will inject each sperm cell in one mature egg using microsurgical instruments and then the fertilized eggs are put in a petri dish with a culture solution for embryo development.



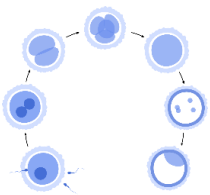
IVF



ICSI

6) Embryo development

Embryo development process starts after the IVF or ICSI fertilization. They will remain in a petri dish with an appropriated culture solution in the incubator and will be observed on regular basis to follow their progress. That means that the embryologist will follow up the time and cells division of each embryo that can be cultivated until day 3 or day 5 when they are selected for transfer.



7) Embryo transfer

This is the last step, and it can occur up to day 5 after the egg retrieval in the IVF laboratory. One or more embryos are placed in the woman's uterus in a simple procedure using a flexible thin catheter. The procedure is painless and after the embryo transfer the woman must rest about 20 to 30 minutes.

HOW MANY EMBRYOS CAN BE TRANSFER?

In Brazil, up two embryos can be transfer for woman until 37 years old and up three embryos for women older than 37 years old. After the transfer, extra good quality embryos can be frozen and stored in liquid nitrogen for future pregnancy attempts or donation.

Usually, the pregnancy test can be done 14 days after the embryo transfer.

WHAT ARE THE PREGNANCY RATES FOR IVF AND ICSI?

In both techniques, the pregnancy rates are around 50% per cycle and it can vary according to woman's age and other male and female infertility factors.

However, the chances of a couple to get pregnant through assisted reproduction treatments like in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI) are higher than getting a pregnancy naturally. The doctor will discuss with each couple the options and treatments potential for the best outcome.

OTHER TECHNIQUES

Additional assisted human reproduction techniques can be recommended as a solution in specific cases as well as to increase the pregnancy rate.

For this reason, the doctor will evaluate each case alone with the purpose to reach a diagnosis and recommend the more reliable technique.

Fertility Preservation

Fertility preservation techniques allow women, men, and couples decide when they want to have children.

People might decide to postpone pregnancy in different situations like for personal or professional reasons, before cancer treatments that can cause permanent infertility such chemotherapy and radiation, before undergoing a surgery like in the ovaries or vasectomy, women fighting premature ovarian aging, among other reasons.

The most proven and successful method of fertility preservation for couples or women using a sperm donor (single parenting) is embryo freezing. This technique follows all the in vitro fertilization (IVF) steps, but instead of transferring the embryos on day 5, they are frozen and stored in liquid nitrogen for a future pregnancy attempt.

For women that have not decide if they want to have children or have not find a partner yet, they can freeze their eggs (cryopreservation). We usually recommend freezing the eggs for women up to 35 years old as it is known that their quality and quantity starts to decline at this point.

Men that will undergo a surgery like vasectomy or are not still sure if they want to have children can freeze sperm samples for future use.

Embryos, eggs, and sperm can be cryopreserved for undefined time without reduce their quality. It is important to clarify that fertility preservation procedures don't guarantee future pregnancy, but they can provide people that want or need to postpone have children a chance to get pregnant in the future.

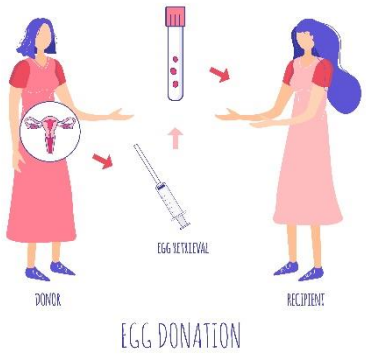
Egg Import and Donation

For women unable to have a child with their own eggs, the specialist can recommend the in vitro fertilization (IVF) treatment using eggs from a donor, an egg from another woman that will be fertilized with the sperm of the patient's partner or with the sperm of a donor.

The main reasons for a woman needing an egg donor are related to menopause, low ovarian reserve, poor egg quality, infertility after a cancer treatment, genetic diseases, and surgeries.

At Fertivitro, it is possible to import egg samples from international banks as Fertivitro has a partnership with a reliable egg bank in Argentina, WeBank Donors, from where patients can purchase egg samples without waiting a long period until the clinic could find a Brazilian young donor. Fertivitro team will help and guide the patients through all the egg import process.

Women can also get eggs donation from a third-party in Brazil like for example another patient that accepts to donate half of their eggs or a young woman that decides to donate her eggs voluntarily, in both cases the egg donation doesn't involve costs and must be anonymous.



Recently, donor eggs can be obtained from someone you know, a female relative until fourth degree kinship can donate her eggs voluntarily, but in the cases that the woman needs a gestational surrogacy, egg donor and gestational carrier cannot be the same relative person in Brazil. Also egg donation from a male partner's relative is not allowed to exclude the possibility of consanguinity.

Egg donation success is related to the age of the egg donor, as younger the donor is the better is the quality and quantity of her eggs. This impacts directly in the embryo quality and the pregnancy rates of the in vitro fertilization treatment.

In Brazil, healthy women with a high ovarian reserve from 18 to 37 years old may qualify to donate eggs after going through a comprehensive set of fertility testing and psychological evaluation. The egg donor also can benefit from the procedure and preserve her fertility by freezing part of her eggs for future use.

Epididymis or Testicular Puncture

These techniques are usually complementary to intracytoplasmic sperm injection (ICSI) treatment when it is not possible to find sperm on the ejaculate, to allow fertilization with the patient's own sperm.

Sperm can be retrieved directly from the epididymis or the testicles as a solution for male infertility cases as azoospermia or vasectomy.

Epididymis or testicular puncture involves collecting sperm directly from the testicles or the epididymis by aspiration with a needle under local anesthesia. In some cases, the doctor can recommend a testicular biopsy to collect a small tissue from the testicles to evaluate the existence of sperm.

Preimplantation Genetic Diagnosis

Embryo genetic testing might be recommended in two different cases.

The first one is the genetic screening of embryos. This technique is recommended for patients with sex-linked diseases or genetic disorders such as cystic fibrosis, to ensure the birth of healthy offspring and stop the transmission to future generations.

The second one is the genetic screening for chromosome anomalies (aneuploidy). It could be recommended to patients with recurrent premature pregnant losses or with a high risk for chromosomal abnormalities, which by testing the embryos and selecting only normal embryos for transfer may increases the chances of success of IVF treatment.

Embryo Donation

Embryo donation or embryo adoption can benefit people and couple that wish to get pregnant by not necessarily want to go through all the in vitro fertilization process or have biological children.

IVF and ICSI treatments often result in extra embryos that were frozen for future pregnancy attempts. At times, couples or individuals that were succeeded in their first treatments may have no plan to use them, so it is possible to donate the frozen embryos to other couples or patients. In Brazil, embryo donation is always anonymous.

Surrogacy

Surrogacy or uterine surrogacy is a third-party help when patients are unable to carry their own baby. That means a woman who agrees to transfer someone else embryo to her uterus to pregnancy until birth.

This technique can help to single male parenting, same-sex male couples, woman with no uterus or woman with uterus abnormalities that want to go through assisted reproduction treatments to have a baby.

The gestational carrier will not be genetically related to the child, but she will carry the pregnancy for the person or couple.

According to the Brazilian Medicine Federal Board (CFM) rules, the carrier must have an alive child and be a female relative of one of the partners until fourth degree kinship, but in cases that includes egg or embryo donation, gestational carrier cannot be the same relative person. The carrier must also sign a legal document to make clear that she is not the mother of the child.

REASONS FOR CANCELLING THE CYCLE

The only reason to cancel the treatment cycle is when there is a poor ovaries' response regarding to follicle development that could result in few or no eggs. The doctor can follow up ovaries' response through ultrasound scans and hormone analysis. In these cases, a new cycle will be started in the next month and the individualized medication plan can be revised.

PREGNANCY RATES FOR ASSISTED TREATMENTS

Pregnancy rates can reach 50% per treatment cycle which means that assisted reproduction global rates are higher than get pregnant naturally.

The chances of getting pregnant increases at each attempt. So, it is possible to estimate that 100 couples could reach a total of 90% pregnancy rate after four consecutive assisted reproduction treatment attempts, depending on woman's age and other infertility factors.

Assisted Conception Calculator

PREGNANCY RATE PER CYCLE					
Treatment	**Normal fallopian tube**	**Normal sperm**	**Anesthesia**	**Pregnancy**	**Live Births**
Timed Intercourse	■	■	●	15%	12%
IUI	■	◆	●	20%	16%
IVF	●	●	◆	40%	34%
ICSI	●	●	◆	40%	34%
Egg import or donation	●	●	●	50%	40%

	■ Required	● Non required	◆ Preferred

Note: each case must always be individualized. If you have any doubts about the treatment, please talk to your specialist and the team of the human reproduction center.

FERTIVITRO

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