

Assisted reproduction guide for women using a sperm donor

Igenomix®



Table of contents

01.	Becoming a mother	04
02.	Assisted reproductive technology	07
03.	Words of wisdom	11



Preface

When I was 20 years old, I was not ready to become a mother. At that time in my life, I couldn't imagine a family without two parents. I spent years setting goals and achieving them. I became a journalist, traveled the world, and enjoyed every moment. As years rolled by, the only goal that did not come to fruition was meeting the perfect man with whom I would get married and raise kids. My love affairs followed one after the other until I finally met the love of my life: me. And then I stopped worrying about being a single mother and chose to embrace it.

When I became a single mother by choice for the first time in 2003, I had chosen it because of my life's circumstances at the time. When I became a single mother by choice again in 2010, I chose that this path because of the happiness I experienced as a single parent had convinced me that single parenthood is just as astounding, rewarding, and challenging as I imagine parenthood with a partner. What you will find in this guide is the information I wish I had access to years ago when I began my journey to become as a single mom

by choice. Within these pages, you will find answers to many of your doubts and fears. You will read descriptions of different treatment options you may wish to consider, things to keep in mind when selecting a donor, and where you can look for support along the way.

Today, I no longer think of myself as this brave girl who decided to become a single mother by choice. Now, I am just another one of many women who decide to become mothers without a male partner. I am part of this growing group of women who have stopped searching for a male partner to become a parent.

For you, at the beginning of your journey, I hope this guide will help you understand the first steps towards motherhood and begin to resolve any lingering doubts and fears.

Author: Rosa Maestro

Journalist, communicator, single mother by choice) through international adoption, founder of the web masola.org and author of several children's stories.

01

Being a mother without a male partner

Reproductive endocrinologists in the United States agree that the number of women who become mothers with the use of anonymous sperm donors has grown exponentially over the last years.

- **Establishing care with a fertility clinic**

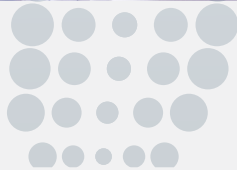
When most people decide to become parents, it's usually because they have thought it through for a long time and decided that they are ready for a child to join their family. In the case of single women or lesbian couples, there is still a long journey ahead from the moment they reach that decision in order to fulfill their wish to become parents. Single mothers by choice and same sex couples will have to consider their options, including adoption and assisted reproductive treatment. This resource is focused on assisted reproductive treatment, but there are many resources online for individuals and couples who wish to explore adoption. In most large cities across the country there are multiple fertility clinics where you can begin to explore your

options for fertility treatment.

Like any healthcare provider, you will want to do some research and perhaps ask for referrals from providers or friends and family to find a reproductive endocrinologist and clinic that will suit you best. You may also consider seeing two or three different reproductive endocrinologists and comparing to select a doctor you feel confident in and comfortable with. Once you have selected a reproductive endocrinologist the process is typically includes the following steps:

Initial Fertility Consultation

During your first visit with a fertility clinic, you will meet with the RE (reproductive endocrinologist) for an initial discussion which typically lasts between thirty to sixty minutes. The RE will collect your medical history, review your family history and reproductive history, and ask questions to understand your goals. The RE will likely review the importance of a healthy lifestyle to prepare your body for pregnancy. It is recommended that you bring a list



of questions you want to ask. You will receive a lot of new information so it is advisable to take some notes or even record the visit with prior approval of the doctor.

Your doctor will likely review the testing recommended to evaluate your fertility. The RE will utilize the results of your fertility evaluation to make a recommendation for your treatment plan.

Fertility Testing Your work-up will likely include tests to evaluate your uterus, fallopian tubes, and ovaries.

1. Transvaginal Ultrasound: This test assesses the condition of your uterus and your ovarian reserve (capacity of the ovary to produce eggs). It is crucial to know if the patient has a diminished **ovarian reserve (DOR)** before star-

ting an assisted reproduction treatment. Age is a risk factor to have DOR. As women age, the number of eggs declines until menopause. By our forties, the monthly probability of a healthy woman to get pregnant with natural conception is only 5% (20% in her thirties). Nevertheless, there are other factors that could increase the risk for DOR, like receiving chemotherapy or radiotherapy, ovarian surgery, endometriosis, early menopause, autoimmune diseases and rare genetic diseases which affect the ovaries.

2. Hysterosalpingogram (HSG): Eggs travel from the ovary to the fallopian tube prior to conception. HSG utilizes an x-ray to see how dye travels through your fallopian tubes. If the dye cannot move through your

fallopian tube/s that could indicate that sperm would not be able to reach an egg for fertilization. If a fallopian tube is blocked your RE will take that into consideration when making your treatment plan.

3. **Blood work:** Your RE will likely order an array of blood work including infectious disease testing, hormone levels, and vitamin levels. Hormone testing typically includes AMH, FSH, and AFC levels. The levels of these hormones help the RE understand your ovarian reserve. They may also offer genetic testing in the form of carrier screening to evaluate your risk to have a child with a genetic disease like cystic fibrosis. The results of carrier screening can help you select a sperm donor who is a good genetic match.

Some same-sex couples plan to have one partner contribute the eggs and the other partner carry the pregnancy. This is commonly referred to as the ROPA (Reception of Oocytes from the Partner) method. If you have a same-sex partner and are planning to utilize ROPA, some tests evaluations to be done on both members of the couple and others only the parent who will be carrying the pregnancy.

- **Results Visit.** On your second visit to your fertility clinic, the results of your testing will be reviewed. Your doctor may recommend additional tests, which could include other medical specialties in order to identify safest approach for a future pregnancy.

If additional evaluations are not necessary, your RE will review your treatment options. You will be informed of the chances of success with each of the treatments and the RE will provide their expert opinion about which one is best suited for you. The treatments will also be broken down step by step so you can leave with a good understanding of your options and the timing, cost, and requirements that are involved.

After the RE describes the available treatment options, you will be the one deciding which assisted

reproductive treatment is best for you. Typically, two options are discussed with single mothers by choice and same-sex lesbian couples: artificial insemination (AI) or in vitro fertilization (IVF) utilizing your own eggs, egg donation, or embryo donation.

In some clinics, the assisted reproductive treatment includes a mandatory consultation with a psychologist. In any case, do not overlook your emotions. You are embarking on a journey where you will experience a whole range of emotions. One day you may feel hopeful, but the next you could feel low without really knowing why. This emotional roller coaster is completely normal, but you have to be prepared. Always acknowledge your emotions, identify how you feel and talk about it with your partner, a friend, a family member or a therapist.



Assisted reproductive treatments

Single women and lesbian couples who want to be mothers can access to various treatments: artificial insemination with donor sperm (AID) or in vitro fertilization (IVF). You can utilize IVF with your own eggs and donor sperm, with donor eggs and donor sperm, or with donated embryos.

- **Artificial insemination with donor sperm (AID)**

Artificial insemination (AI) is one of the simplest assisted reproductive techniques. It is the technique that is the most similar to the process of naturally conceiving. If your reproductive endocrinologist advises you to try to start with artificial insemination, one of the first steps will be to select a sperm donor.

- **Choosing a sperm donor**
When choosing a donor you may consider a known donor such as a family member or friend who has offered to donate or you may plan to use an anonymous donor. There are many different sperm banks, often called cryobanks, that sell anonymous donor sperm. Donors are typically evaluated for many different factors including their sperm motility and count, drug screening, infectious disease screening, family

history screening, psychological assessment, criminal background check, and genetic testing. Donors have to be legal age and be physically and psychologically in good condition.

- **Initial ultrasound.** With this ultrasound, the reproductive endocrinologist will assess the condition of the uterus in order to ensure there are no anomalies and no ovarian cysts.
- **Ovarian stimulation.** Depending on your ovarian reserve, the REt will let you know if ovarian stimulation is recommended prior the insemination. The treatment consists of giving you hormonal medication with the aim of increasing the number of oocytes you will produce in order to increase the chances for you to get pregnant. Taking hormones in order to obtain many mature oocytes will take place during the 8 to 10 days after the beginning of your period.
- **Ultrasound monitorings.** During the next two weeks, the RE may monitor you with transvaginal ultrasounds and bloodwork to track your developing follicles.

It is important to emphasize that you may wish to consider purchasing and setting aside additional sperm samples from the original donor in the event you would like to have more babies with the same donor in the future.



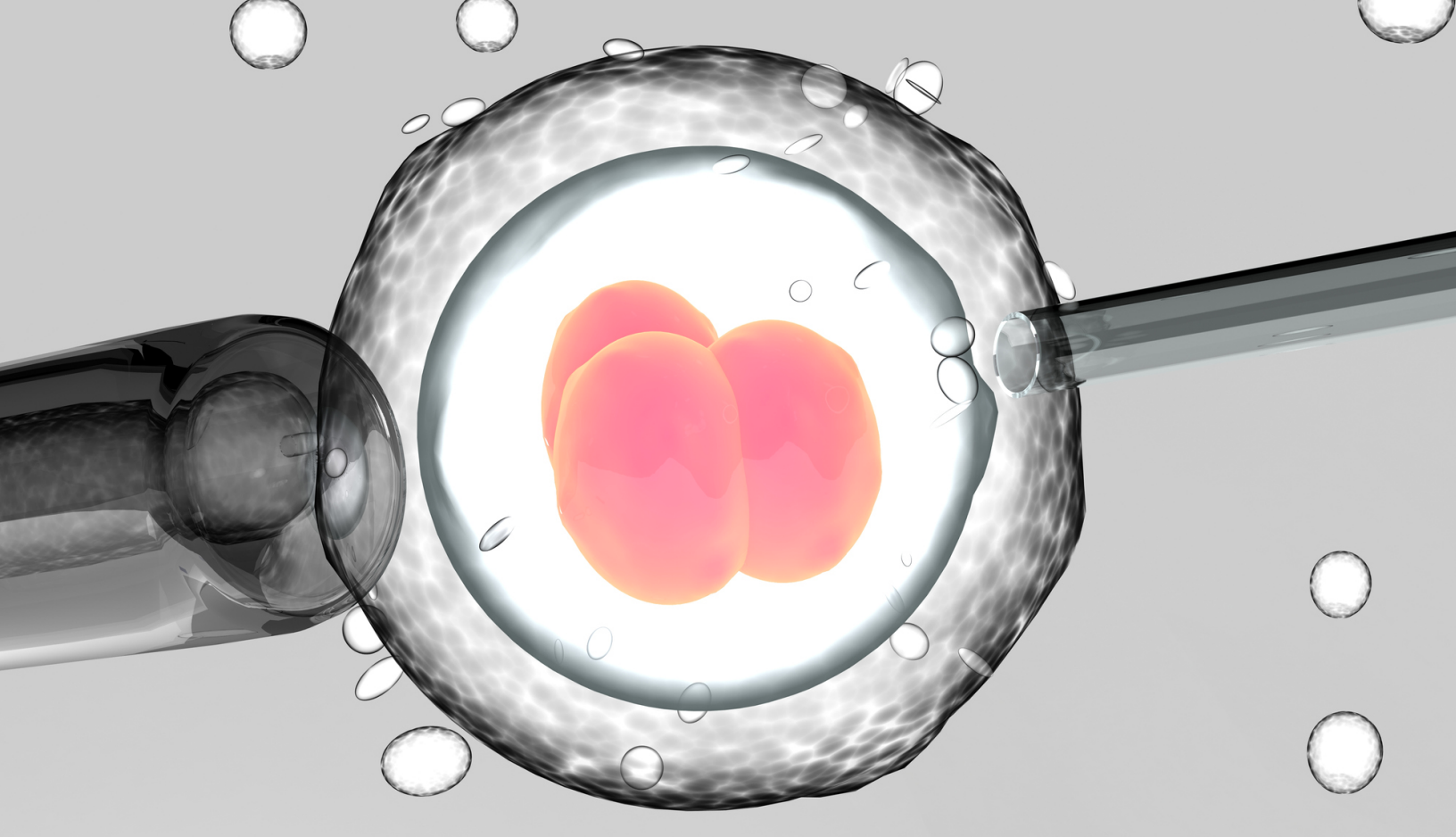
- **Ovulation.** When one or more follicles are mature, your doctor will prescribe an HCG trigger. This way, the ideal moment to proceed with the artificial insemination can be monitored, which will be in the 24 to 48 hours after the administration of HCG.
- **Insemination.** The AID consists of the introduction of the donor's sperm in the mother's uterus using a small tube called a catheter. The process is quick and pain-free, and you will be able to leave after just a few minutes and resume your daily activities. Something that all women are wondering when they start an assisted reproduction treatment are the success rates. The chances of getting pregnant depend on many medical and personal factors, therefore it is

recommended that you ask your RE to provide you with statistics for your success rate.

- **In vitro fertilization (IVF) with donor sperm**

With in vitro fertilization (IVF), the egg is fertilized in the lab with the thawed donor sperm, which has previously been processed. Later, the embryo/s are transferred into the uterus. Like it has been mentioned before, IVF offers many possibilities:

- **With your own eggs.** Given that the REI assessment has found no evidence that it is impossible for you to get pregnant with your own eggs.
- **Egg donation.** This option is selected when there is a low probability for an individual to get pregnant with her own eggs.



- **Embryos donation.** This option consists of adopting one or more embryos that another couple has donated.
- **ROPA Method.** This is the treatment that many of lesbian couples choose. One partner undergoes egg retrieval and the other partner carries the pregnancy.
- **Choosing and profile of the sperm donor.** Selecting the donor is the same process in all of the treatments.
- **Initial ultrasound.** It is always necessary to carry out an ultrasound before starting any assisted reproduction treatment in order to assess the condition of the uterus and ovarian reserve.

The following steps will not be necessary if you are going to adopt embryos or if you are going to use donor eggs.

- **Ovarian stimulation.** This consists in the administration of a medication which will stimulate the ovary to generate more oocytes than usual. In a natural cycle, only one oocyte reaches full maturity.

With ovarian stimulation, the goal is that multiple follicles will reach maturity.

- **Egg Retrieval.** Utilizing the results of the monitoring vaginal ultrasounds and bloodwork, the REt will determine the right moment for egg retrieval.
- **Fertilization and Culture .** The eggs will be fertilized in the lab with the donor sperm and grown in culture for about five or six days. s. According to the development of the embryo or embryos, the embryologist will decide the timing of the embryo transfer.

Prior to transfer you may wish to consider testing the embryos with PGT-A (preimplantation genetic testing for aneuploidy) Previously called, PGS, PGT-A is a genetic test performed on embryos to identify numerical chromosomal abnormalities. The test is performed on a biopsy that is taken from the embryo at blastocyst stage. By analyzing all embryos generated in an IVF treatment cycle, those free of chromosomal aneuploidy can be selectively transferred. As a result, the pregnancy rates per transfer are significantly increased and the miscarriage rates decreased when a chromosomally normal (euploid) embryo is transferred. If you have a genetic disease which runs in your family such as a hereditary cancer

mutation, you may wish to utilize PGT-M (preimplantation genetic testing for monogenic disease) to significantly reduce the risk for the disease in your children.

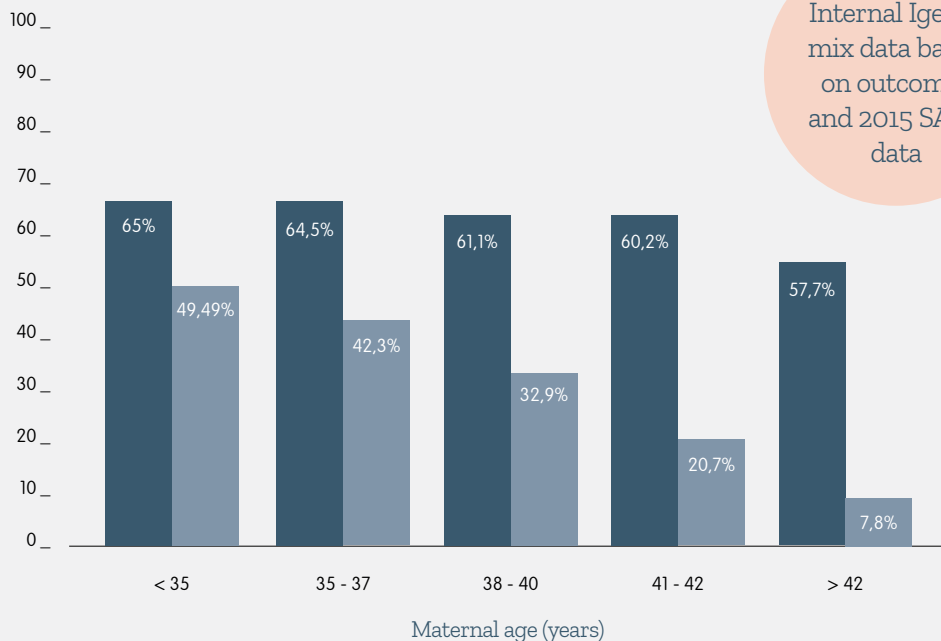
These steps apply to individuals that will undergo embryo transfer:

- **Preparation of the uterine lining.** The endometrium matters. The endometrium is a layer of tissue that covers the interior of the uterus and when the embryo implants itself and stays during the pregnancy. It is just as important as the embryo itself, even if it is less well-known. The success of the reproduction depends on the synchronization between the embryo and the uterine lining. The gestational mother has to undergo a hormonal treatment to prepare the uterine lining in order to ease the implantation of the embryo in the mother's uterus. Besides the treatment that you'll be prescribed by your reproductive endocrinologist, you

can ask to about the ERA test by Igenomix. ERA is a diagnostic test that utilizes a biopsy of the uterus to help evaluate a patient's endometrial receptivity. The period of receptivity, known as the implantation window, can vary from one woman to another. As a matter of fact, 3 of 10 women have an displaced implantation window. ERA identifies a patient's unique "window of implantation" (WOI) leading to a personalized embryo transfer (pET) to improve the success of future embryo transfers.

- **Embryo transfer.** Prior to transfer, the uterus is monitored through the vaginal ultrasounds which measure the thickening of the uterine lining and the patient will be prescribed medication. During the embryo transfer a catheter is loaded with the embryo(s) and inserted into the uterus under ultrasound guidance.

Pregnancy rate in the case of a blastocyst transfer



Internal Igenomix data based on outcomes and 2015 SART data

Internal data from Igenomix based on the results and data

● IVF with PGS

● IVF without PGS

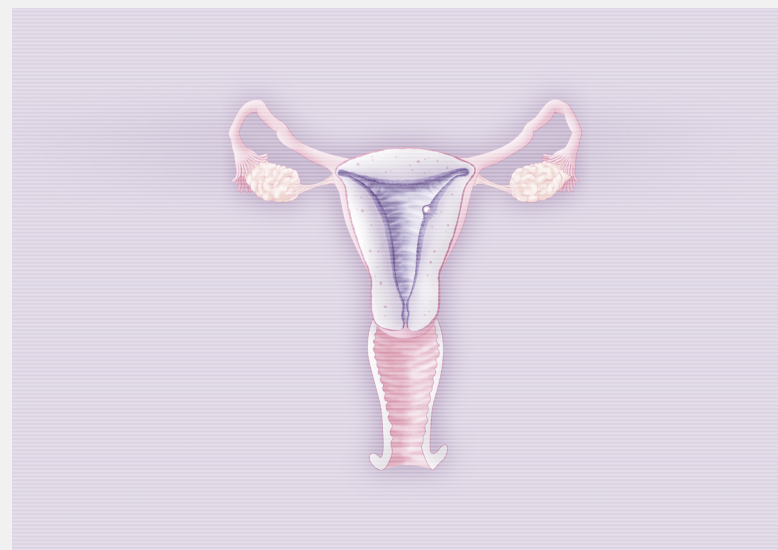
03

Words of Wisdom

- **Take care of your physical health.** From the moment that you decide you want to become pregnant you should try to start leading a healthy lifestyle in order to have the best chance of conceiving.. It is advised to stop smoking tobacco, drinking alcohol and taking drugs. You must try to maintain a balanced and healthy diet, reduce your sugar, caffeine and other processed food intake. It is advisable to maintain a healthy weight by exercising mildly, like walking or swimming, provided that your reproductive endocrinologist doesn't advise against it.
- **Monitor your stress and anxiety.** You will have to practice patience. Fertility treatment can be a long road with ups and downs. Try to adopt a positive attitude.
- **Talk about your feelings.** Communicate what you feel to your loved ones. It is vital to express what you are feeling.. Talking helps relieve fears, tensions, frustration, anxiety.
- **You are not alone, look for support.** It is not advised to go through this alone, even if you decided to do it as a single mother by choice. You can be a single mother, but you don't have to be alone. people close to you can support you. Look for support from your family and friends, from associations of single mothers of their own accord. For women undergoing this process as a couple, it is vital that you support one another. Talk and share what you are thinking and feeling with your partner. It is important that you remain united during the whole process.
- **Have fun.** It may be a difficult road, but you need to make sure that the process you are going through

is not the only thing happening in your life and your brain. Continue doing what you usually do, go out with friends, travel, go to the movies... Have fun!

- **Hobbies and projects.** Having other projects or hobbies will allow you not to focus only on the goal of becoming a mother. There is a lot of waiting involved in fertility treatment. Plan a small trip, treat yourself to something you enjoy, start a new project, and stay involved in your favorite hobbies
- **Psychological support.** Do not hesitate to ask for psychological support. Sometimes you will go through harder periods than what you'd imagined at the beginning. Assisted reproductive clinics often offer psychological consultations you make wish to explore. You can also find another therapist of your choice who you trust. What is important is that you do not push your emotions aside during treatment.



Igenomix®

www.igenomix.us

infousa@igenomix.com

(305) 501-4948