igenomix

PIONEERS IN **REPRODUCTIVE GENETICS**

How can you improve your fertility?

Tips to achieve pregnancy

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Introduction

Fertilization falls on the responsibility of an egg and a sperm. It's amazing how such two small cells have such great power: That of creating life. Although sometimes we see it as a simple thing (such as a mere union of two cells), it is the opposite. It's a very complex process, filled with obstacles which must be overcome, and is why it often takes more time than we would like.

The process of becoming pregnant is determined by a series of factors that depend on both the man and the woman. Among them is age – a very important factor when it comes to having a child. A woman's fertility begins to decline at age 30 and the decline accelerates over the next several years. Because of this, the earlier you start trying to become pregnant, the greater your chances of success. However, this doesn't mean women should lose all hope of having a baby after this age. The field of assisted reproductive technology is rapidly progressing with many new advances in the last decade, which has allowed many women to achieve a pregnancy in their thirties and forties.

Having a child is a challenge, and it's a decision that will accompany you the rest of your life. Before deciding, you should take the time to thoroughly consider all the options and avoid letting yourself be carried away by social pressures. Sometimes **this can be an emotionally difficult process for a couple, and for this reason, it's very important that you support each other** and take advantage of all the resources available from doctors, nurses, friends, and family.

This eBook is aimed at all women who want to become pregnant, and who are interested in increasing control over their health. The goal is to help them achieve a healthy lifestyle and learn to identify and avoid risky behaviors.

Infertility affects **1 in 6 couples of child-bearing age**:

40%

is due to **male** factors

40%

is due to **female** factors

20%

is due to **mixed** factors or reasons of unknown origin

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Elements that influence your fertility

Female factors, male factors, and the problems that come from them

Fertility is the ability to conceive a baby; it results from the interaction of male and female factors.

The problem of infertility is more common than you think: It affects 1 in 6 couples of child-bearing age; 40% is due to male factors, 40% is due to female factors, and the remaining 20% is due to mixed factors, or reasons of unknown origin. Those factors can be physical, hormonal, lifestyle, or environmental.

Infertility and sterility

First, it's important that you know the difference between the concepts of infertility and sterility, since we often use them as synonyms – but they aren't.

Sterility is the inability to achieve a pregnancy after a year of trying to have a child (without using contraceptives).

Infertility is the inability to give live birth to a baby. In other words, the woman becomes pregnant, but the baby is not born alive, either due to birth defects or complications during pregnancy.

The period in which a woman is fertile is **from day 7 to day 20 of her cycle**. These are the optimal days to achieve fertilization.

Female factors

Female factors that influence fertility are the ones directly related to the menstrual cycle. If there is any deviation from the normal process of the cycle or its phases, fertility problems appear.

• THE MENSTRUAL CYCLE

The **menstrual cycle** is how the female reproductive system prepares for pregnancy. Reproductive theory says the menstrual cycle lasts approximately 28 days, and that ovulation takes place around day 14. However, only 15% of women have cycles of 28 days, and cycles between 21 and 35 days are considered normal.

The **fertile period** occurs from day 7 to day 20 of the cycle. These are the optimal days to achieve fertilization. You should also know that while sperm have a half-life of 3 to 5 days, the ovum (once released), only lives from 4 to 12 hours. This means that even if you have intercourse 2 days before ovulation, the sperm will still be alive and have reproductive capacity. The menstrual cycle is a hormonally-controlled process that consists of two simultaneous cycles: The ovarian cycle and the endometrial cycle.

• THE OVARIAN CYCLE

The ovarian cycle aims at the maturation of the oocytes and hormone production so that if fertilization occurs, the embryo can be implanted. It consists of 2 phases:

- **Follicular phase:** This is responsible for the maturation of follicles. Only one follicle will ultimately mature and become a Graafian follicle; the rest will be transformed into fibrous bodies. The main hormone that acts in this phase is FSH (Follicle Stimulating Hormone).

Ovulation takes place on the 14th day of the cycle, coinciding with the increase in LH (luteinizing hormone). A mature ovum is expelled into the fallopian tube, inside which it can be fertilized.

- **Luteal phase:** LH produces transformations in the follicle and turns it into a corpus luteum. The corpus luteum is able to secrete estrogen, progesterone, and produce changes in a woman's body.

- **THE ENDOMETRIAL CYCLE**

The endometrial cycle's function is to prepare the endometrium (the mucous layer of the uterus), so that it can nourish the fertilized egg in case of implantation. It is divided into 3 phases:

- **Menstruation:** This is the shedding of the endometrium along with the inactivation of the corpus luteum. It lasts between 2 and 7 days, depending on the woman. It is the first phase of the cycle and begins the count at day one, marking the beginning of the current cycle and the end of the previous.

- **Proliferative phase:** The endometrium has been shed during menstruation, has a thickness of 1 or 2 mm, and will begin to thicken again. Estrogen acts by converting the endometrial glands: Before they were straight, narrow and short; now they become long and twisted.

- **Secretory phase:** Progesterone further increases the thickness, the number, and the size of the blood vessels that nourish it. The endometrial glands gain the ability to accumulate glycogen, a carbohydrate energy reserve that can be transformed into glucose when the body requires it.

Women's bodies stop producing eggs after birth, so there comes a time when their follicular reserves are exhausted, and they stop being fertile.

PROBLEMS IN THE OVARIES

Ovaries are the female reproductive glands responsible for secreting sex hormones and producing eggs. The two main entities that cause fertility problems are primary ovarian insufficiency and polycystic ovarian syndrome.

- **PRIMARY OVARIAN INSUFFICIENCY**

At birth, women have 1 or 2 million ovarian follicles that (with the arrival of puberty) are reduced to about 500,000. This reserve decreases throughout a woman's life. Out of the millions that she started with, only about 400 or 500 will mature at all.

As women stop producing eggs after birth, there comes a time when the follicular reserve is exhausted and women stop being fertile. Around age 40, fertility is significantly reduced and continues to decline until menopause.

Primary ovarian insufficiency occurs when the ovaries stop functioning normally before the age of 40. It manifests as irregular menstrual cycles and a significant reduction in fertility. There are known risk factors such as heredity, autoimmune diseases, viral infections, fragile X syndrome, Turner syndrome, and treatments with radiotherapy and chemotherapy – but in 90% of cases, the exact cause is unknown.

Primary ovarian insufficiency (also called premature ovarian insufficiency), is responsible for symptoms very similar to those of menopause: Hot flashes, irritability, decreased libido, pain during intercourse, vaginal dryness, etc. However, it should not be confused with premature menopause, since in ovarian insufficiency, some women still have occasional periods and may become pregnant.

• POLYCYSTIC OVARIAN SYNDROME (PCOS)

Polycystic ovary syndrome is the leading cause of female infertility, and is caused by the ovaries' excessive production of male sex hormones. This causes the growth of cysts, which consequently create ovaries with a greater fluid volume and follicle number than is typical.

The characteristic symptoms are: Hirsutism (excess hair on the face, chest, abdomen or thighs), acne, obesity, and irregular menstruation with cycles lasting more than 35 days (sometimes without ovulation).

PROBLEMS IN THE ENDOMETRIUM

The endometrium is the layer of mucous tissue of the uterus, the place where the baby develops if fertilization occurs. The most common problems that arise in the endometrium are a displaced implantation window and endometriosis.

• DISPLACED IMPLANTATION WINDOW

During each menstrual cycle, sex hormones are responsible for preparing the endometrium for the possible arrival of an embryo. After fertilization, the embryo goes through cellular divisions until the 6th day, where implantation takes place.

The **implantation window** (or period of receptivity) is the period of time in which the endometrium presents a suitable environment for the embryo to implant. It takes place between days 19 and 21 of the menstrual cycle, 5-7 days after ovulation.

In some women, the window is displaced. For these women, if an embryo is transferred at the typical time for assisted reproduction treatment, the chance of implantation is significantly reduced.

• ENDOMETRIOSIS

Endometriosis is the presence of endometrial tissue outside the uterine cavity. It can appear in the fallopian tubes, the intestines, or the bladder, but it most often appears in the ovary.

In some women, this produces painful menstruation with pain occurring in the abdomen, pelvis, lower back, and is sometimes is accompanied by so-called "chocolate" cysts that contain clotted menstrual blood. Other women do not present symptoms, but are diagnosed when they come to the clinic for assistance getting pregnant.

• CHRONIC ENDOMETRITIS

Endometritis is the inflammation of the endometrium, the mucous layer lining the uterus. It can be caused by an infection of chlamydia or gonorrhea, or by a combination of normally existing vaginal bacteria.

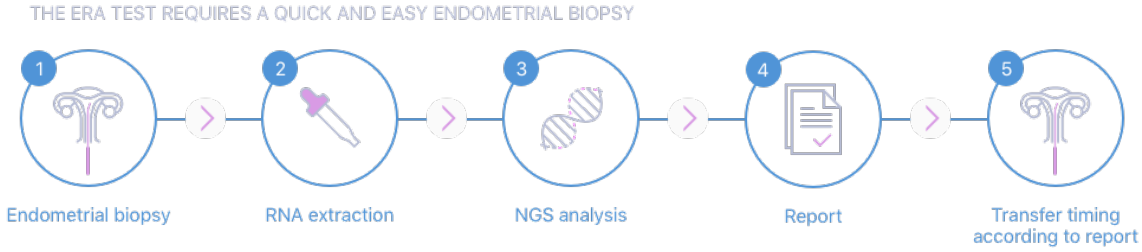
A few years ago, the belief was the endometrium was a sterile cavity, free of microorganisms. But recent discoveries show that not only is it colonized by microorganisms, but some are vital for its proper functioning.

A group of researchers from Igenomix revealed that women with endometrial flora colonized by Lactobacillus (a benign bacteria that predominates in our digestive, urinary, and genital systems), have a rate of higher implantation and lower miscarriage. Hence, it is important to maintain endometrial flora balance.

• IGENOMIX TESTS

At Igenomix we have tests focused on solving endometrial problems to help you achieve pregnancy:

- **ERA** (Endometrial Receptivity Analysis): Allows identification of each woman's implantation window, and the carrying out of a personalized embryo transfer (pET). This has shown an increase in reproductive success in treatments using assisted reproductive techniques. This analysis is indicated for women with recurrent implantation failure.



- **ALICE** (Analysis of Infectious Chronic Endometritis): A diagnostic test that detects eight bacteria responsible for chronic endometritis. If the test is positive, the recommendation is administration of antibiotics or probiotics. This test and protocol is indicated for women who have had more than one miscarriage or recurrent implantation failures.

Available in the U.S. mid 2019.

- **EMMA** (Endometrial Microbiome Metagenomic Analysis): This determines the percentage of bacteria required in the endometrium to improve the reproductive prognosis of women. It includes the ALICE test, so that it also detects the presence of pathogenic bacteria. It indicates if the microbial environment of the uterus is adequate (or not) for embryo implantation. This test is indicated for any woman who wants to become pregnant, but especially for those who have had recurrent implantation failures.

Available in the U.S. mid 2019.

Male factors

Most known causes of male infertility are due to disorders of the testes. The most common are varicocele (swelling of the scrotal veins) and orchitis (inflammation of the testicles).

The second cause is disorders in sperm transport, including improper ejaculation. Among them are premature ejaculation and anejaculation (lack of ejaculation). These can sometimes be consequences of chemotherapy and radiotherapy treatments.

- **SPERM QUALITY**

Male factors that influence fertility are studied using the spermiogram.

The volume of semen, sperm count, concentration, mobility, shape, etc., are analyzed.

To prevent male infertility, it's recommended to avoid sexually transmitted diseases, drugs, radiation, hot baths or saunas, and to wear loose-fitting underwear.

Age is a very important factor when it comes to having a child. The sooner you start trying to get pregnant, the better your chances.

3
Tips to achieve pregnancy

Elements that depend on you:

Our society is changing, and our concept of family is changing with it. With the incorporation of women into the workforce and the assumption of increasingly important positions, some women are forced to delay motherhood. Age is a very important factor when it comes to having a child. The decrease in female fertility begins at age 30 and gradually accelerates over the next several years. At age 40, the possibility of pregnancy is half that of younger women, and the incidence of spontaneous miscarriage is doubled or tripled. For this reason, the sooner you start trying to get pregnant, the greater your chances.

Biologically, the best age to get pregnant is between 20 and 30 years, the perfect time being age 25.

However, remember that it's your decision to have a baby, and also to decide when is the best time to have it.

Lifestyle

A person's lifestyle (among other things) includes their diet, physical exercise, hygiene, toxic habits, and mental health. It is very important to follow a healthy lifestyle, but even more so if you intend to get pregnant – because your health directly impacts your baby's.

DIET

Your diet is a key factor both to achieve pregnancy and to maintain its proper development throughout the 40-week term. You must eat a healthy, varied, and balanced diet, rich in fruits, vegetables, and legumes, and moderate in fats of animal origin.

The proportion of nutrients should be as follows:

- **Carbohydrates:** These are main source of energy, representing 55-60% of the total caloric intake. Only 10% should be simple or fast absorption carbohydrates (sugars), the rest should be complex or slowly absorbed, such as the starches found in cereals, legumes, and tubers.
- **Proteins:** These should represent 12-15% of total calories. Proteins of animal origin ensure the inclusion of all essential amino acids.
- **Fats:** These should represent 30-35% of the daily intake (<10% saturated fats, 15-20% monounsaturated fats, and 5% polyunsaturated fats). Foods rich in high-quality fats such as olive oil, nuts, or blue fish are recommended.

A healthy diet for adults according to the World Health Organization includes the following:

- Fruit, vegetables, legumes, nuts and whole grains.
- At least five portions of fruit and vegetables per day.
- Less than 10% of total energy intake from free sugars. Free sugars are all sugars added to foods or drinks by the manufacturer, cook or consumer, as well as sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates.
- Less than 30% of total energy intake from fats. Unsaturated fats (found in fish, avocado and nuts) are preferable to saturated fats (found in fatty meat, butter, palm and coconut oil, cheese and lard) and trans-fats of all kinds (found in baked and fried foods, and pre-packaged snacks and foods).

- Less than 5 g of salt (equivalent to about one teaspoon) per day.

Your physical weight influences your chances of conception.

The WHO recommends a total of 150 minutes of physical activity per week divided into several short sessions.

PHYSICAL EXERCISE

Your weight influences your chances of conception. If you have a normal weight with respect to your height (BMI 18.5-24.9), you are more likely to have good health, and your chance of getting pregnant is greater. If your weight is too high (or too low), your chances of getting pregnant decrease.

Obesity (BMI> 30) has a negative influence at the time of conception. Excess weight implies an excess in body fat, which is stored in the body's adipose cells. These cells produce estrogen, which is normal and necessary for the functioning of the menstrual cycle – but too much estrogen interferes with the cycle. In addition, it increases the possibility of developing endometriosis and polycystic ovary syndrome.

Too low a weight (BMI <18.5) often leads to a low level of estrogen, irregular menstrual cycles, or even the absence of menstruation.

Physical exercise has many health **benefits** among which are: Weight control, blood sugar level regulation, reduced risk of heart disease, improved mental health and mood, improved sleep, stronger bones and muscles, etc.

The WHO recommends a total of 150 minutes of physical activity per week divided into several brief sessions: e.g. 30 minutes of moderate exercise, 5 times per week.

The best cardiovascular exercises are, walking, dancing, and swimming. To achieve positive effects for muscle tone and flexibility, yoga, stretching, and low-impact exercises with weights are recommended.

The WHO recommends a total of **150 minutes of physical activity per week** divided into several brief sessions.

TOXIC HABITS

The consumption of toxic substances is directly related to a decrease in fertility and an increased risk of complications during pregnancy (if it even happens).

- **ALCOHOL**

It is common, widespread knowledge that pregnant women should not drink alcohol, as there is no safe dose during pregnancy. However, there is not as much common knowledge about how preconception consumption affects both men and women.

Alcohol and female fertility

A woman's metabolism absorbs and metabolizes alcohol faster than a man's. Because of this, the consequences alcohol produces in women are more serious. The consumption of alcohol can alter the production of hormones, and cause problems in ovulation and menstrual cycles. Women who do not drink are more likely to get pregnant, and also avoid complications with their baby when they get pregnant.

Alcohol and male fertility

In men, the consumption of alcohol decreases testosterone production and increases estrogen; this leads to a reduction in the number and quality of sperm. In addition, it decreases the absorption of zinc (an essential mineral for semen formation) and affects libido, which may cause impotency.

• TOBACCO

Tobacco decreases the chances of achieving pregnancy both with and without assisted reproduction techniques. Avoiding tobacco and exposure is recommended and directed for both men and women.

Tobacco and female fertility

Nicotine is toxic and affects female fertility, producing an accelerated loss of ovules and the advancement of menopause.

Tobacco and male fertility

In men, reproductive capacity decreases with tobacco use, causing changes in the motility, concentration, and shape of sperm.

There is no miracle solution to become pregnant. Unfortunately, we don't have all the answers.

4
Conclusion

Fertility is determined by a series of conditions that depends on both male and female factors. Some of them are uncontrollable due to genetics, communicable diseases, or unknown causes. The remaining factors, on the other hand, can be controlled by making small **lifestyle** changes: Food, physical exercise, toxic habits, etc.

Maintaining healthy a lifestyle both increases the chances of getting pregnant and also minimizes the possibility of complications.

There is no miracle solution to become pregnant. Unfortunately, we don't have all the answers. But the more information becomes known about the our body's functioning, the more resources we have at our disposal to increase the chances to experience motherhood.

If you are considering starting to try and have a baby, it's best to make an appointment with your physician, establish a **prenatal consultation**, and make sure that you are in optimal health to have a baby. Always follow expert guidelines, and avoid following advice from unreliable sources that could put your health at risk.

My IVF Journey: Real Stories from Real IVF Warriors

Since 1985, more than one million babies have been born in the USA as a result of IVF and associated treatments. Every single one of these cases is unique – and your fertility journey will be as individual as all of the others. However, with all this variation comes a lot of uncertainty. Many women worry how long it will take, if their pregnancy will be healthy, or if they'll even be able to conceive. However, when you've got so many hopes and dreams riding on your fertility treatment, it's useful to remember that everyone has a story.

At Igenomix, our highly qualified experts are continuously innovating in the field of reproductive medicine. We employ the most advanced technology to deliver the highest standard of care. With our pioneering approach to fertility treatments, we do everything we possibly can to help each one of our patients start a family – no matter their circumstances. Some stories have happy endings and others haven't finished their journey quite yet – but we like to think that we're doing our part to help these couples keep fighting. Nonetheless, sharing experiences is an important way to prepare for the road ahead.

Ashley & Alex's IVF Journey

I remember watching the test happen live. I remember hearing the doctor speak to me. I remember my eyes welling up. I remember being escorted to the bathroom to change. I remember the piercing scream that came out of my mouth and collapsing on the floor. I remember the nurse rushing in to pick me up. I remember yelling for my husband. I remember Alex practically carrying me outside the hospital as anxiety attacked and I gasped for air.

It was at that moment our lives took a hard detour.

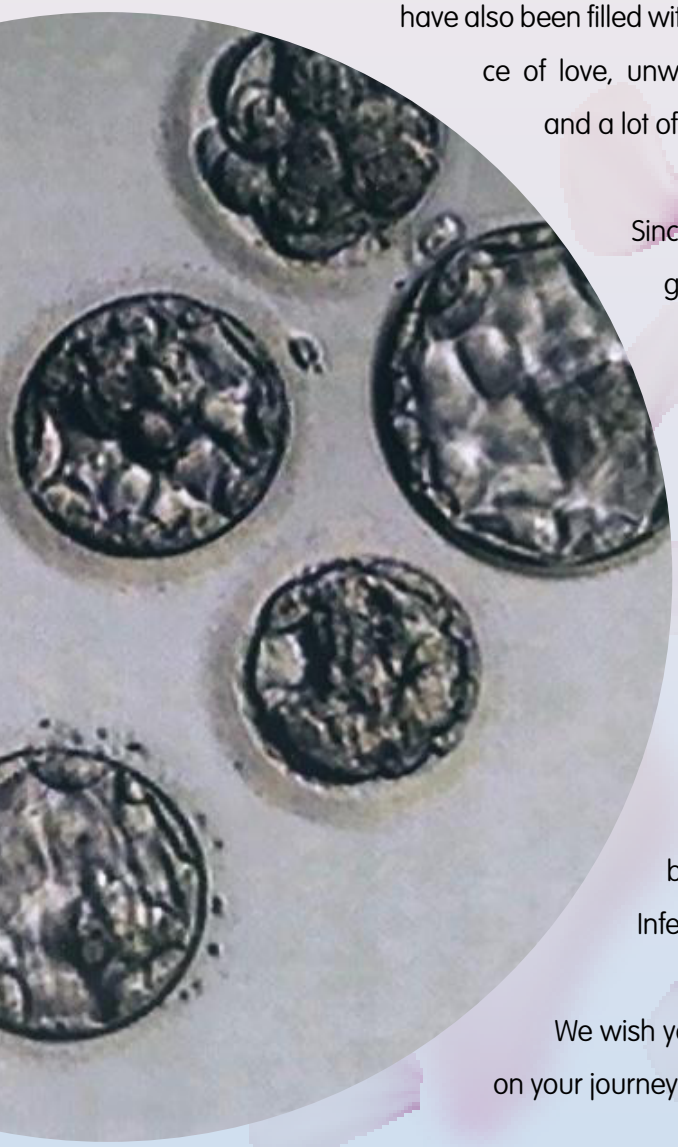
Our backstory: At 18 I was diagnosed with Ulcerative Colitis, which is a chronic, inflammatory bowel disease of the digestive tract. In simple terms, ulcers grew in my colon and as they got too wide and too deep, they would burst causing excessive blood loss from the rectum. I had advanced and aggressive UC, and no amount of medication or treatments could get it into remission. After a 5 year battle, and at age 23, I was told it was urgent for me to have my entire large intestine/colon/rectum removed. I underwent multiple, major surgeries and am now colon free.

Fast forward to Alex and I trying to start a family. After trying for a long time the fun way with no luck, we knew we needed to seek help. In January 2018, I was diagnosed with infertility. We learned at that time A) the inflammation from my UC spread into my Fallopian Tubes, B) the scar tissue from my surgeries collapsed around both tubes causing 100% blockage, and C) I had developed severe Hydrosalpinx due to A and B. We were told IVF is our only option to conceive on our own.

You can follow our journey on Instagram: @some_assembly_required__

I think I always knew something wasn't right. I think I always knew becoming a mother wasn't going to be an easy journey. What in my life has been? But to hear multiple doctors tell you getting pregnant naturally is not an option, that your body is too damaged from the past to form new life, that you have a 0% chance to conceive on your own; it was absolutely devastating. There has been grief, and guilt, and anger, and deep sorrow, and disappointment; all of these feelings at the same time, it's overwhelming.

There have been gut-wrenching tears, copious amounts of research and educating ourselves on IVF, and many difficult conversations. But our days have also been filled with an abundance of love, unwavering support, and a lot of hope.



Since our diagnosis we have gone through 3 IVF Cycles and have had 7 losses. Our fourth IVF Cycle starts soon and we will be adding PGS testing, additional medications and steroids to our protocol, and completing a Hysteroscopy prior to our embryo transfer.

Alex and I refuse to settle for a 0% chance; we will not allow this diagnosis to derail us from our dream of building a family. We have a lot of love to give and will turn every stone to find a way. We are ready to fight, we are embracing this hardship, and we are mixing love and science. Infertility better be ready for a battle.

We wish you loads of luck and are sending you tons of positive energy on your journey ahead.

You can follow our journey on Instagram: @some_assembly_required__

Alvie's IVF Journey

Fifteen agonizing months of trying to give our daughter a sibling, we were finally told that we only have a 3% chance of ever conceiving naturally. So either our daughter is a miracle child and we didn't know it, or she had closed my fallopian tube on her way out - a running joke between my husband and I because humor is necessary to survive infertility.

The HSG (Hysterosalpingogram*) x-ray was the last exam left after the months of panels of bloodwork and tests from both my husband and I revealed nothing was wrong. This exam was optional and almost unnecessary as I had gotten pregnant naturally before. I vividly remember laying under the huge x-ray machine, feet in stirrup, uterus pumped with dye, ready to be told all was normal. But my right fallopian tube refused to spill. There was a blockage. We had conceived so naturally with our first, with an easy pregnancy and an uncomplicated vaginal delivery that nobody expected a physical issue.

With this diagnosis, we were given a 9% success with medicated IUI (Intrauterine Insemination**) and 60% with In Vitro Fertilization (IVF). We knew IVF was the way to go if we were serious about growing our family. Coming to terms with IVF was difficult. None of our friends seemed to have trouble conceiving, and if they were, nobody talked about it. It was isolating and I withdrew. I felt guilty having to spend thousands of dollars of our savings. I was ashamed of my body for failing us. I grieved for the loss of creating a child with my husband intimately. I grieved for the loss of "meant to be". I felt like doing IVF was defying destiny, like maybe we weren't supposed to have a second child.

You can follow our journey on Instagram: @thepineappledetour

That very notion cut deep. My husband reminded me that we still wouldn't have a second child if that was the case. But the fact that IVF was an option for us meant we still had a fighting chance and maybe we were meant to go down this road. I hadn't quite processed all those feelings when I started the birth control pills - the first step in IVF marking the official handover of my body to science. Once we began, I learned that a lot could go wrong and a lot still had to line up to make this happen. For something as scientific and calculated as IVF, a great deal of it was out of our control and we found ourselves holding onto faith. If it's meant to be, it will be.

As we dove head first into IVF, we knew that the thousands of dollars, emotional investment, and time does not guarantee a live birth pregnancy. But it meant a chance, a chance that not many people have. Overcoming my fear of needles, I became an amateur chemist; mixing and jabbing myself with 2-3 hormone-filled injections in the abdomen every day for 10 days to grow as many eggs as possible. I had blood drawn and ultrasound scans every other day to monitor their growth; it was a delicate balance of growing as many at the same rate without triggering an ovulation. I watched as my belly got bruised and bloated from the shots and thought of the days where baby-making was fun and free. When the majority of the eggs were at the optimal size, I was put under anesthesia and 17 eggs were retrieved. By the grace of the universe, all of them were fertilized via ICSI (Intracytoplasmic sperm injection***). Eight embryos made it to Day 5 blastocyst stage and were biopsied then sent for preimplantation genetic screening (PGS). Two long weeks later, we found out 5 were genetically normal. I underwent another surgery to prepare my uterus for transfer and waited to heal. Once I was given the all clear, I started the oral estrogen pills, followed by daily progesterone suppositories, and the

infamous progesterone in oil shots - 22 gauge needle to my buttocks every other night for 12 weeks, if the pregnancy is viable. Two weeks of monitoring later, my uterus was considered ready and receptive for a frozen embryo transfer (FET). On the day of transfer, after months of treatment, we knew that there was still a 30-40% chance that this "perfectly thawed" and hatched embryo won't implant and result in a live birth pregnancy.

We are so fortunate that it worked on the first try for us. There wasn't a moment I thought it would work and took it for granted. I no longer question if the way we got our second baby defied destiny. A million things could have gone wrong, but by the grace of the universe, it worked and here we are today. We took a detour, but this child is meant to be. Our daughter is finally going to be a big sister this June!

Glossary:

*Hysterosalpingogram: a procedure that uses an X-ray to look at your fallopian tubes and uterus

**Intrauterine Insemination: a fertility treatment that involves placing sperm inside a woman's uterus to facilitate fertilization

***Intracytoplasmic sperm injection: involves the direct injection of sperm into eggs obtained from in vitro fertilization

Victoria's IVF Journey

Hi, I'm Victoria, and I'm infertile. After 3 years of "trying but not trying" we realized something might be wrong. We started seeing a fertility specialist when I was about 33 years old and my levels were, as my doctor put it, "that of a 48-year-old."Lovely! We started with IUI, and did about five rounds, with the full throttle of stimulation, etc. I really only got a few follicles to fully grow after all the shots and meds my body could consume. After a laparoscopic procedure I was finally diagnosed with endometriosis and low ovarian reserve. More delightful news! Injections and meds for a few more months in preparation for IVF and when I finally got 2 mature follicles, we decided to seize the day! "All you need is one", they say! Most people would never even consider doing IVF with only 2 eggs, but it was the best we had ever gotten and I needed to try. I needed to know. I woke up from my retrieval procedure to a grim look on my husband's face. I knew it. This was it. The moment I was "expecting" (no pun intended). One egg was actually black in color– I officially had rotten eggs. Neither egg ended up fertilizing. Shocker. Years of poking myself with needles and crying in my car at baby showers, and this is what I get? This was the death of my DNA, but where was the funeral? I laid there on a cold table with tears streaming down my face. So empty. So hopeless. So broken. So alone.

Our doctor suggested that we move on to donor eggs if we wanted a baby. It took a lot of time to understand and process what it would mean for our family. What it would mean for me. What would be my role exactly? I took the time I needed to grieve my eggs. My DNA. It's a process, and you have to go through it, for everyone's sake, especially for the child. But I couldn't wait too long. I wanted a baby and I wasn't getting any younger. I was tired of losing, I was tired of grieving. I wanted to be a mom. To someone. Anyone. Anyone who would take me and call me mom. Right before our last IVF cycle with my own eggs, I started thinking about what I would do if it didn't work. I was mentally preparing for this. My egg quality and quantity was low, I knew it was our last go even before it started. I secretly started doing research, I didn't even tell my husband. I learned that donor eggs had a high probability of working and also allowed me a chance to be someone's biological mother. It was time. Time

You can follow our journey on Instagram: @expectinganything

for me to let go of my DNA. It took a lot of kicking and screaming and crying my eyes out to get to this point, and I can't say I was 100% past the sadness, when I finally decided to move forward. But I did feel a smile creeping in. I wanted to experience pregnancy, breast feeding, and giving birth. Was that too much to ask for? Donor eggs were my best chance at doing that. I didn't care what it would take, I didn't care what I had to put my body through, or my finances, I just wanted to be a mom. I had already been through so much; I could handle it. It would be worth it in the end, they said.

After taking the time to grieve my eggs and the chance of passing on my DNA, we moved on to donor eggs. When we started down the route of using an egg donor, everyone made it sound like it was a shoe in. I remember our doctor saying our chances of success were around 90%. When you select an egg donor, you're basically saying, okay, let's just get pregnant already. You don't really consider that it won't work. It's simple, you choose a young girl with a ton of healthy eggs, and then you get pregnant. No brainer. We chose our donor and she looked just like me, twinsies! She had a similar background, family history and overall vibe. I couldn't believe it. We never met, but the agency provided a ton of info. Our doctor even commented, "wow, Victoria, she's your perfect match". She started her appointments, meds and shots and our doctor gave us the play by play. It was strange to be watching all of this from the side lines, but my doctor made me feel important and connected in the process. It was the day before her IVF egg retrieval, and I'll never forget the phone call from our doctor. She said "I'm so sorry Victoria, your donor really is like you, even her eggs are like yours." She had lost more than half of her follicles overnight and only had 4 that matured. 4 was not enough. I immediately felt an overwhelming feeling of sadness. But this time, my sadness wasn't about me. My tears started to fall. All I kept thinking was - this poor, sweet, young girl. At 28 years old, she is now facing a real life game changer. My heart hurt for her. My connection with her was so strong, I felt her pain like it was my own. And I don't even know her real name. We didn't know what to do next, but we knew we needed a break. We had avoided planning trips for so long - "just in case" I needed to be local for a procedure or so my husband could be "on call" to unload the swimming soldiers. We put other dreams on hold because our fertility treatments

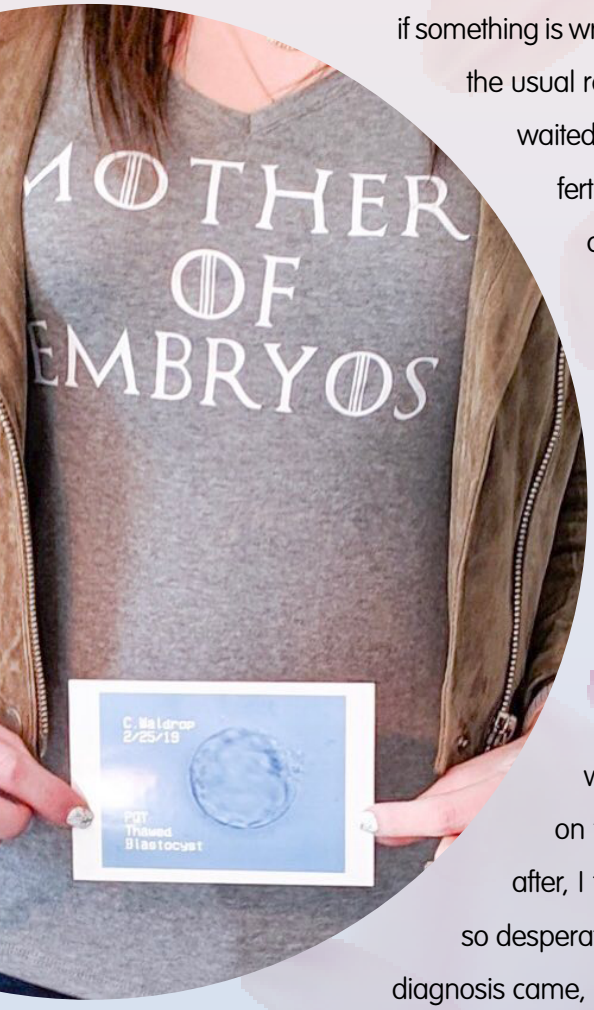
took all of our money. We missed out on life, and we needed to live. So, we decided to take a year off, to travel the world and focus on us for the first time in a while.

I had been grieving for a very long time. I had tried EVERYTHING. Podcasts, yoga, writing, writing, lots of writing. Therapy. Drinking, oh the drinking. I ugly cried - A LOT. I created a shrine in my closet where I would go sit on the floor and pray, and I'm not a religious person. I don't even know who I was praying to, but I prayed. With infertility, every day is a new battle. A battle against yourself. To stay strong, when all you want to do is cry. My strength has been tested to unimaginable depths. I wanted to give up so many times. I wanted to quit it ALL. The needles, the pills, the probing and prodding, the constant doctor visits. The procedures. The surgeries. The egg donors. I constantly asked myself - is it all worth it? The financial stress? The marital stress? I would often think: I just can't do this anymore. But somehow, I did. Somehow, I could. I just kept going. It's easy to dwell on how unfair and hard it is. But at some point, enough is enough. I knew I couldn't be sad and angry forever. I needed to find the good to carry on. And that's exactly what I did. Infertility showed me a new version of myself - a woman who survived tragedy and became stronger from it. I realized that if this is the only curveball I'm thrown in life, I'd consider myself pretty darn lucky. I have so much other stuff in my life to be grateful for. I have fallen in love with my husband in a deeper more intense way. He has my back in a way I can't explain. After all of this, he stills chooses me - an infertile woman. And yep, I FINALLY got pregnant. After a long break, a lot of healing, a new doctor and a new donor, our miracle was made. She came to me when she knew I was strong and ready. My beautiful rainbow after an ugly storm - Miss Florence Viola, born on our 9 year wedding anniversary, the perfect love story. And I know now, it was ALWAYS meant to be her. Had I gotten pregnant years ago, the easy way, or even with my own eggs, it wouldn't be her. And without her, I wouldn't be me. I used to ask myself - Why me? But, now I know why. She is why. She was always meant for us.

Corinne's IVF Journey

Our fertility journey began in 2017 when, after 2 years of marriage, we were ready to start our family. As high school sweethearts, we had plenty of years to plan when and how we wanted to start our family, and we were excited and ready to be pregnant. We had prepared for our baby in all the 'normal' ways--starting our careers, renovating a house, working hard at being financially stable. We were prepared.... or so we thought.

After 10 years on the birth control pill, my period was MIA for weeks after stopping. I knew it could take time to go back to normal, but I was impatient, and there was a little voice whispering in my ear, 'What if something is wrong?' I scheduled an appointment with my OBGYN, and she gave me the usual reassurances 'this is totally normal,' 'it takes time,' 'don't worry.' So we waited, but not passively. I researched, tracked my basal body temp, joined fertility forums, and generally acted like any couple actively trying to conceive. Still, 4 months in, there was no sign of a period, no positive ovulation tests, nothing. Back to the doctor I went, anxious, impatient, and now certain that there was something going on with my body. They did blood work, asked more questions, and prescribed Provera to initiate a period. In two months, they would do an ultrasound.



As the days ticked away, after the blood work returned 'normal,' I was increasingly anxious. I was ready to be a mother, and not at all used to feeling so out of control. The ultrasound day finally came, and I lay on my back in that darkened room, naked from the waist down, the only sound the tapping of the ultrasound tech's fingers on the keys of the machine. I felt alone, and scared. In the exam room after, I twisted my wedding ring around my finger, waiting for the results. I so desperately wanted an answer, something that could be 'fixed,' but when the diagnosis came, I felt everything slipping out from under me. PCOS. Though there was always a part of me insisting that there was something wrong, there must have been an equal part that was still unconvinced, unprepared to handle that little truth. I was prescribed Metformin, again promised that it should 'fix' me—within 3 months, she said, I should return to normal cycles. If not, I could see a specialist.

You can follow our journey on Instagram: @rinneyj

When I left the doctor's office that day, I sat in my car, called my mother, and cried. I felt broken, betrayed by my body. I didn't know then that that feeling would become my new normal. That I would spend the next year and a half living my life in 30 day increments, carefully building up enough hope to sustain me, and then having it all slip away, again and again.

Meanwhile, I dove headfirst into reading journal articles, published studies on PCOS (Polycystic ovary syndrome), research and statistics from advocacy groups, testimonials from other women whose ovaries were also riddled with cysts, whose bodies had also failed them. Still, I wanted more. The Metformin had done nothing, seemingly, and after a month and a half I was impatient. I was tired of waiting, tired of being told that it was 'normal.' I had been trying to have a baby for nearly 8 months, and had not had a single real period. Had no indications of ovulating, not even once. I was exhausted, and yet I knew I had barely even begun.

So, I made the appointment with a reproductive endocrinologist in the area who came highly recommended, and waited three weeks for a consultation. I had my medical records sent to me first, so I could read the notes in my chart, see the ultrasound photos they had never shown me. That consultation became the first of many visits I would make to the practice, the first of many times I would sit in the chair across the desk from my doctor and feel as if someone was finally listening to me. As if I had a voice, and a little bit of control, in a time when I felt like infertility had taken over my life, left me powerless and heartbroken. Months passed, cycling through varying doses of Letrazole, then Clomid, then eventually combinations: Letrazole and Gonal-F, Clomid and Gonal-F. I had ultrasound after ultrasound, continuous blood work, and an HSG (Hysterosalpingogram) to check for blocked tubes (they were clear, thankfully). Finally, I was ovulating, but still it wasn't enough. A semen analysis cleared Kevin—his sperm count was excellent, and the morphology, while just slightly low, was still nothing to worry about. I was the broken one, it seemed, and each month drove that home a little bit more.

On the first cycle with Gonal-F, my last ultrasound showed too many follicles growing in my ovaries. It was too risky, my doctor said, you could end up with multiples. We canceled the cycle, and started over, waiting for the cysts to shrink. Another failure. Another month wasted. My anxiety and depression was coming in waves now, my broken body failing me over and over again. I was barely keeping it together.

After two more combination cycles with injectables, we were ready for an IUI. Maybe, I thought, this will be it. Kevin held my hand the day of the IUI, and it was over in just minutes. I was more optimistic than I had been in ages. I let myself hope again. Just over a week later, my period came again. I went back to my doctor, prepared for another baseline ultrasound, another cycle. He was gentle and calm as he said, "Corinne, it's time to move on. We've tried everything, and if it were going to work…well, it probably would have worked already. I think it's time for IVF." I was stunned. When you're going through infertility, you know that IVF is, for most, the end of the road. You know it's a possibility. But you never think it will be you. You think, 'Surely I will be pregnant soon. Surely something will work.'

The day after Christmas we had our official IVF consultation with my doctor. We discussed medications, injections, genetic testing, carrier screenings, retrieval, and transfer. We looked at the financial obligations, and tried not to panic about the fact that trying this last ditch effort to have our baby would cost essentially all of our savings, and then some. We tiptoed around the reality of the statistics—at best, a 40% chance of success.

In January, we began our first round of IVF. Ten days of stims. Ultrasounds and bloodwork nearly every other day. A trigger shot. My body was exhausted, but holding tough with the flood of hormones and medications, the constant needles. By the time egg retrieval rolled around, my belly was swollen, the follicles that cluttered my ovaries so big that it hurt to walk, or sit. I woke up from anesthesia loopy and in pain, but happy. They had retrieved 24 eggs. The next day, 17 had fertilized. After a week, we were left with 13 embryos that were biopsied, sent for genetic testing, and frozen. In the end, 6 of our little embabies were genetically 'normal,' and recommended for transfer—5 girls, and just 1 boy.

February began the process of prepping to transfer our strong, beautiful little girl embryo. I took estradiol 4 times a day, began progesterone injections 5 days before our scheduled transfer. February 25 we saw our perfect little embryo, watched on the screen as she was placed in my uterus, and began the hardest waiting we'd ever been through. I was PUPO (pregnant until proven otherwise), and I was desperately excited, and desperately scared. Each day brought more anxiety, more worry, and fading hope. By the last few days before my blood test, I was convinced it hadn't worked. I refused to test at home, feeling a bit of infertility-induced PTSD when it came to pregnancy tests. I spent that final night in tears. All I wanted was to be a mom.

It was late afternoon by the time they called with the results from my beta test, and I was so anxious I nearly threw up. Then the nurse said those two words: "You're pregnant!" I sobbed, full on ugly tears, make up dripping off my face. I called Kevin, crying and laughing and still in disbelief. Our second beta test came back two days later, and my levels had tripled. As I write this, I am just shy of 9 weeks pregnant. I have seen my baby girl three times, and listened to her heart beat. I am ecstatic, and terrified. I am trying to believe in my body again, to believe that come November we will hold her in our arms. Infertility will never leave me. I will never forget the pain and heartbreak and loss we experienced, or the fear and anxiety that still sneaks up on me. But I will also never forget the amazing women I have met through the infertility community, or the way our journeys can break us, but still make us stronger, more resilient. And we will never, ever stop being grateful for our little IVF miracle.

You can follow our journey on Instagram: @rinneyj

Lindsey and Michael's IVF Journey

Our IVF journey started in March of 2016. I have PCOS which compromised my egg quality greatly.

After two retrievals totaling more than 30 eggs, a chemical pregnancy, and a miscarriage, we decided that if we had any embryos that made it to day five, they would need to be tested at this point.

I changed my life for six months to build egg quality. We knew that would be the trick - - if anything would work. At my third retrieval, we retrieved 30 eggs, 20 were mature, and 17 fertilized. We knew it was a numbers game. Our embryos never grew how they should. We had three make it to day five (woo hoo! Never had that many) and all three were PGS biopsied. All three came back normal!

We transferred the first embryo in August of 2018 from that batch and had a chemical pregnancy. We knew with all the trauma that my body had in the past year that it was in our best interest to re-do the ERA test.

Sure enough, my window had shifted 17 hours. We prepared for transfer number six with my adjusted window and lucky number six it was! I am now 27 weeks pregnant and expecting a baby boy in July of 2019.

If it weren't for Igenomix, I am not sure this pregnancy would have been possible. It saved us from a lot of heartache of knowing the chromosome outcome along with my adjusted window. I preach these two tests so much. It's a game-changer.

When you work so hard for something, you want to make sure everything in your control is perfect - this allowed me to feel I gave it my all. I am so appreciative of this process and the gift it has given us.

Misty and Jaycen's IVF Journey

After being together for 4+ years and a recent marriage, we were finally ready to start a family at age 38. In theory it seemed like it would be so easy, just time my cycles and it will happen. We were wrong.

After several chemical pregnancies we were left frustrated and heartbroken. We decided to visit our first fertility doctor who did a complete workup on both of us to determine where we stood with egg quality and morphology.

There were a couple of issues with me but my husband was fine. This was good news! The doctor recommended IUI first for a few rounds and then we would see where it took us. We were so excited thinking that this was the ticket to starting our family. Sadly all 3 IUI's left us empty handed.

Next step was to talk about IVF. The costs were going to be astronomical with our current doctor so I chose to do some research and found another doctor out of state that was reasonable with positive reviews. After our consult we did our first retrieval in the next few months. We did PGS testing and ended up with 3 beautiful embryos. We transferred our first embryo and waited the dreaded two weeks, sadly, another chemical pregnancy. We just didn't understand!! She was a 5aa quality PGS tested embryo.

We went back to the drawing board with our doctor to discuss next steps. He recommended a new procedure called ERA. It was an out of pocket procedure but all of the results so far were positive with his clientele. What did we have to lose? This was our last opportunity as our budget was drying up.

We did the ERA biopsy and lo and behold our results came back "PRE receptive". Finally some answers we had been looking for. Our doctor recommended we repeat the same test the next month, again, "PRE receptive". This was so promising and gave us the hope we needed to push on for our baby.

We scheduled our next transfer and added 1 additional day of progesterone to our protocol. I had never been so nervous in my life the day of our blood test. It was our last chance, it had to work. We nervously awaited the results the rest of the day. Finally the call came in, it was POSITIVE!!!

We couldn't believe it, we were finally going to be parents. We truly believe in our hearts that without the ERA test we would not be holding our baby girl today. Fertility is not as cookie cutter as doctors once thought and the ERA test proved that 100%.

Since the birth of our daughter I have recommended Igenomix to another friend who was also found to be PRE receptive. After multiple losses and 4 failed IVF attempts she is now pregnant with a baby boy. We cannot thank Igenomix enough for their innovative test that brought us our baby girl and our dream of having a family of our own.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