

Everything You Need to Know About IVF and Surrogacy/Egg Donation



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Introduction to Reproductive Sciences Medical Center

Preface

urrently millions of infertility patients and intended parents (hereafter we will call them patients) are seeking treatments and solutions from numerous parties and navigating through the system on their own, without any guidance. It usually takes months to years to identify the problem, get the correct diagnosis and then start to navigate through the process to correct the problem. During this process considerable resources, including time, money and emotions are wasted, with some patients permanently forfeiting or giving up their chance to becoming parents.

In order to solve this problem, we at Reproductive Sciences Medical Center have developed a "One-Stop-Service" model to help our patients to navigate through the infertility maze while also enhancing the pregnancy success rate and bringing down the cost for patients.

Collin & Carolyn F., San Diego, CA

"We could not be happier with our experience with RSMC. While the support staff has been outstanding throughout the process, we made the decision to work with RSMC based on the quality and obvious experience of the doctors. My wife and I would not put our success in the hands of anyone else at this point and trust him implicitly with our care. The steps we took to decide on whether to start an IVF cycle took many turns (good and bad) prior to meeting with RSMC's doctor. He made the difference and provided the optimism we did not get anywhere else!"

This book serves as a guideline for infertility patients and intended parents to understand the process, identify numerous parties and walk through the process with confidence and success.

Existing System

The infertility industry is totally segmented and each treatment/service is handled by a different provider. As things stand now, the patients themselves have to jump through all the hoops and navigate through the system on their own.

Infertility Treatment/Service Breakdown:

- 1. Infertility Diagnosis and Testing offered by IVF clinic or GYN doctor
- 2. IVF (and Other SART Procedures) offered by IVF clinic
- 3. Genetic Screening/Diagnosis by specialized genetic testing laboratory
- 4. Surrogacy by surrogate agency
- 5. Egg Donation/Sperm Donation by egg donor/sperm donor agency
- 6. OB/GYN Care & Delivery by OBGYN doctor & hospitals
- 7. Legal Service for Surrogacy/Egg Donation Case by fertility legal counsel
- 8. Specialty Insurance for Surrogacy/Egg Donor Case by specialty insurance

RSMC's Solution and Mission Statement

We at Reproductive Sciences Medical Center have developed this "One-Stop-Service" model to help our patients navigate through the infertility maze while also enhancing the pregnancy success rate and bringing down the cost for patients.





Introduction to Reproductive Sciences Medical Center

Our credentials and experience: Since 1995 our team has successfully performed more than 4,000 IVF cycles and 1,500 surrogacy and egg donation cycles. Our Reproductive Endocrinologists have more than 80 years of combined experience.

Over 30 Selected Protocols Available to Serve Our Patients: The credentials, however, are only the first step. Often, the doctor needs to have enough case experience and support to choose the right protocol for the patients. You will be surprised to learn that many clinics have a "one protocol fits all" type of treatment option for their patients. There are many reasons for this, maybe the doctor does not have enough experience to handle different protocols or challenging cases; maybe the clinic can't support some treatment plans; maybe it is just the deficiency of the doctor, or even economic reasons behind it. But in truth, the treatment plan for infertility is like women's shoes: the majority of women will fit in size 7-8, but there are people that need size 4-5 or 10-11. So, be sure the

RSMC's High Success Pregnancy Rate



2013 RSMC IVF Pregnancy Success Rate v.s. 2013 SART National IVF Pregnancy Success Rate

doctors consider all the information and select the right protocol, the best treatment plan for you.

- **Guarantee/Refund Program:** We offer you the option of a Guarantee/Refund to help you to choose IVF treatment with confidence and to ease financial burden. Once admitted into this Guarantee program, if you don't get pregnant successfully (safely passed the first trimester), you will be refunded up to 100% of the treatment money you have paid. While IVF is a very successful treatment, some patients with certain conditions require multiple cycles of IVF to achieve a successful pregnancy. RSMC offers four different options for a patient to choose from as part of the Guarantee Program.
- **Continuous Monitoring and Interactions with RSMC:** A good doctor and reproductive center will monitor your development and learn from your developing symptoms and also learn from the failures. This continuous learning/ monitoring practice is critical for success. Obviously it is important that you are comfortable asking your doctor questions, sharing information, and feeling like a partner in the decision-making process of your individualized treatment protocol.
- **Embryology Lab Credentials:** Many of you might not know how important the lab is, but in the case of IVF, the lab might play a key role, up to 30% or 40%, in the ultimate success of your attempt to achieve a pregnancy! So, if you are considering IVF, it is important to make sure the lab you choose is well qualified! Be sure they have a full-time, dedicated lab director; they can offer extended embryo culture to the blastocyst stage; they offer pre-implantation screening/diagnosis; vitrification for preservation of eggs and embryos, etc.

Although clinics have their own criteria for who qualifies for blastocyst transfer, the truth is some clinics discourage transferring the blastocyst stage embryos simply because the lab may not have the capability to support good



Introduction to Reproductive Sciences Medical Center

embryo growth. A lab's capability certainly is an instrumental factor in the success of IVF.

Another important factor is whether the lab has a full-time lab director and whether the director has good credentials and is solely devoted to the lab. After you investigate those facts, you will be surprised to find that most clinics can't afford full-time lab director or the leading physician simply assumes the directorship on paper.

Network and Industry Seminars: RSMC will conduct network events and industry seminars. These usually will be hosted/attended by our Chief Medical Officer, Reproductive Endocrinologists, OB/GYN doctors, and Lab Scientists.

She was a 'hopeless' case – now she's a mommy!

(Article published in WOMAN'S WORLD, 9/22/08)

After four doctors, hundreds of injections and years of tears, Stephanie Boes was so convinced she'd never be a mom, she almost gave up. But look at her now!

Stephanie Boes fidgeted at her desk in a San Diego investment firm, pretending to work. Any minute now, the call could come – the call from her doctor. So how could she concentrate on anything else?

Four hours later, she couldn't take it anymore. "I'm going home," she blurted to her boss. And there, alone, Stephanie had the biggest cry of her life. And then the phone rang...

"Let's start our family!"

A family of her own. That had always been Stephanie's dream. One her high school sweetheart, Austin, shared.

From the moment they met at 17, modeling back-to-school clothes at a mall near their Michigan hometown, they were on the same wavelength. And even as college and work took them to different states, they knew: We belong together.

Both from large families, they loved kids. So even before they tied the knot on a boat at sunset in Key West, they had baby names picked out. Well, a girl's name at least: Zoe. And at 33, they decided: Let's start our family!

But nothing happened. And on trips back home, as her sisters all jiggled babies on their hips, Stephanie had no happy announcement to make. Something's wrong, she gulped. But every test – hormone levels, ovary function, sperm count and more – came back normal. Which was good – and bad. Because there was nothing to fix!

"Now what?" she asked her doctor. The answer: "In vitro." At least there's hope, she told herself. But their first attempts failed. "Relax and it'll happen," friends and relatives urged. But how could she relax, when her life revolved around blood draws, hormone injections, egg retrievals, embryo transfers – and tears? They knew adoption was an option. But there was no reason IVF shouldn't work – so they tried again.

This time, Stephanie was so heartbroken, a year passed before she could consider another attempt. Perfect timing, it turned out – because a co-worker going through IVF had another doctor to recommend. One who didn't rush through patients. At Dr. Samuel H. Wood's office in La Jolla, Stephanie didn't feel like a number, like she had before. But IVF failed again. And Stephanie knew... "I"m done," she said at the post-procedure consult, a kind of team "huddle" to plan their next move. But Dr. Wood had an idea...

"Welcome to the world!"

If he irritated her uterine lining before the next transfer, he said, her body would speed healing nutrients there – which should help the embryos "stick". And doing two transfers days apart instead of just one might help, too.

"No," Stephanie said. "I can't." But she's meant to be a mom, Austin couldn't help thinking. And this way could work... "One last try, honey," he coaxed. And there was such hope in his eyes, Stephanie felt a glimmer, too.

Two weeks after the procedure, she went for blood work as usual. Then, because waiting for the results was torture, she left work to take a home pregnancy test: negative. That's why she was crying her eyes out when the phone rang. "Honey," Austin said. "Dr. Wood wants us to come to his office." "Oh, Austin," she cried. "I know what he's going to tell us!" But she decided to go anyway. For closure. And when they got there ... "You're pregnant!" Dr. Wood said. This is some kind of awful mistake! She reeled. But home pregnancy tests aren't foolproof. And repeat blood work confirmed it. She was having a baby!

Still, after everything they'd been through. Stephanie worried every day: Is the baby okay? But nine months later, after a perfect pregnancy and four pushes, she was holding a miracle in her arms. "We've been waiting so long for you!" she cried. "Welcome to the world, Zoe!"

Now Stephanie revels in baby Zoe's every move and changes her outfit – from on extensive collection of pink! – several times a day. "I love dressing her up!" she laughs. Her advice: "there is hope! Just look at Zoe! They didn't know it when they chose it 10 years ago, but her name means "life." And, says Stephanie, "It couldn't be a better fit."



Introduction of Infertility Processes, A Mind-Map to Understanding IVF Treatment Medical Center

General Feelings and Experiences

ost infertile couples are frustrated and confused and can be overwhelmed by devastating disappointments trying to conceive. They could not achieve that which should be a natural and basic human right; to have the baby they desire!

Fact – Women are delaying childbearing in our society. They put the matter on hold for any number of reasons, including basic uncertainties of life, living expenses, career opportunities, lifestyle, love seeking and more ...

Fact – Over 10% of American childbearing age couples have some degree of infertility issues; in China, due to the pollution (air, water and food), the figure is over 13%. Sperm counts and quality get lower; women, as they age, ovarian reserves get significantly lower.



- **Experience** When you decide to have a child but are unsuccessful, there can be a crushing sense of personal guilt for you for not putting the baby as a priority before your career, before your lifestyle, before finding the prefect partner ... It is a devastating feeling for couples, especially women 33 years and older.
- **Experience** When you decide to have a child but are unsuccessful, other people start to provide free advice. How many of you have heard these annoying recommendations from doctors, your friends, or even your husband? They would say: "You are fine, just relax and keep trying, your stress is the factor! Once a woman stops worrying and is

not stressed, she will get a baby in a snap." You become irritated at hearing this type of advice over and over while your biological clock keeps ticking. So, you eventually exclaim:

"I am perfectly calm, it is not the stress. I have to do something more than just trying and relax."

The fact is, no one really knows the truth, but we do know our body better than anybody else. At some point, you stop listening and decide to take action!

Fact – Age is the number one factor in women's infertility. A woman older than 30 years (especially older than 35 years) can face a long list of infertility issues. For example, with perfect fertility health it takes a 35-year-old women only 3–4 months of trying to get pregnant unassisted on average; it takes more than 3 years for a 40-year-old to conceive a baby! So, gals, no one is getting any younger, every day counts.

The Definition of Infertility (or when to consider it as a problem and worth checking things out!)

- If you have tried to have a baby for an entire year and have been unsuccessful.
- If you are over 33-years-old and have tried to get pregnant for over 6 months.
- If you've had irregular periods.
- If you've had two or more miscarriages.
- If you are over 35 years of age and have never had a natural pregnancy.



Introduction of Infertility Processes, A Mind-Map to Understanding IVF Treatment Medical Center

5 Stages of Discovering Infertility

- Stage 1 You take things easy, off the birth control methods and start to have carefree sex – You feel good. The mentality is "it will happen when it happens."
- Stage 2 Carefree sex is not working quickly enough, so you start timing lovemaking to correspond with ovulation. After sex, you might pull your legs up, stand on your head, and don't take a shower for the night. Both of you and your partner start to be a little anxious.
- Stage 3 Still no luck. So you rush to the drug store, gauge your temperature, use the ovulation detection kit Now you mean business! Every month you experience an emotional roller coaster a late period makes you so happy and when you spot the first blood you burst into tears.
- Stage 4 The ovulation kit has not done the trick. You gave a few more try and start to seriously talk with your partner about the maybe infertility problem. You also might get emotional and consider the infertility is a taboo. Some couples get really tense at this stage. The clock is ticking, you become more and more upset and feel the urgency to have a baby.

Stage 5 – Now, you are officially upset. You summon all your courage and go to see your gynecologist or go directly to an infertility specialist – Reproductive Endocrinologist – Your thinking at this point is "Let's find out what is going on?"



Lily, Grace, and Kaitlyn

Lily is a beautiful, fun-loving, sweet little girl who loves to laugh and sing. She enjoys ballet, playing dress up and reading her books. Grace and Kaitlyn are twins and could not be more different. Grace is quiet and shy, while Kaitlyn is outgoing and always in the middle of the action. What they do have in common is being very strong-willed. Grace and Katie will definitely let us know when they want something, whether it be more scrambled eggs or a cuddle. They just had their first birthday party and are starting to walk. Like their personalities, their appearances are very different. Grace has blond hair and blue eyes, while Kaitlyn has dark hair and brown eyes. They are both beautiful. We did not know whether we would ever be able to have children of our own. Without fertility treatment, we would not have been able to. When we found out we were pregnant (first with our daughter Lily, who will be 3 in January, and then with the twins), we could not have been happier. Our lives are forever changed and we are so blessed to have our 3 little angels in our lives. We owe a big thank you to RSMC's doctor and the entire team.



1 Introduction of Infertility Processes, A Mind-Map to Understanding IVF Treatment Medical Center

No Matter What Your Personal Story Is, You Are Frustrated, Confused and Exhausted!

Some women manage everyday life and look like "business as usual" on the outside, but on the inside, it is really hard for them to hold it together. Your frustration grows when you see babies everywhere you go. You are invited to a baby shower literally every week! The park, shopping mall, restaurant, babies are just everywhere. And the worst thing is, all your friends and relatives are so insensitive to your true feelings. To make you feel better, they would say how much they envy your lifestyle, how many dinners you could go to, how thin you look, how many vacations you can go on without worrying ...

Freud once said: Men think about sex every 7 minutes. The truth is, women who are going through infertility are thinking of having a baby with the same frequency and maybe with more intensity. Regardless your personal story, you want a baby so badly (whether you've had one previously or not) and you feel like your life depends on it. Your happiness, your marriage and everything seems to depend on it.

Conclusion: Shame or Hero?

If we can't have a baby, who are we? What defines us as a person? Infertility often triggers feeling of low self-esteem. Women beat themselves up with questions such as, "what's wrong with my body" or, "why didn't I try to have a child when I was 21?", "who am I if I don't have a baby?", or "will my partner still love me without a family?"

After, or even during, the process of stumbling through infertility treatment, some women feel ashamed of undergoing anything not involving natural conception. This is especially true for those women who blame infertility on themselves, not their partner. Some women continue to beat themselves up after the treatment and are ashamed to talk about it. But you are wrong! It takes so much character for you to have the child you desire. It takes courage, patience, proactivity and lots of determination to land that baby in your arms. So, why should you be ashamed? Surveys show that the stress on a woman caused by infertility is equal to that of a life-threatening

Y.L., San Diego, CA

Because I am Chinese and grew up in a medical family, I have used many Chinese therapies to try to overcome infertility issues. However, after 6 years of trying and numerous Chinese doctors (Acupuncture, herbs, etc.), there was still no success in sight. We went to another IVF clinic and did not get pregnant in the first cycle.

I moved to San Diego and started the IVF process in April 2013. The doctors and medical staff here are excellent, and they truly demonstrated the concept of "never turning patients away" on my case. The result: a beautiful, healthy 8 pound baby girl.

Because my successful IVF treatment gave me my precious baby daughter, I have strong faith in RSMC, the staff, and their medical approach. During the process, I learned the importance of correct protocols, lab procedures and PGS, Most fertility centers focus only on doctors and the doctor's resume, however my experience told me that there is so much more that is important in addition to having a doctor. It is the doctors, the lab skills, the treatment protocols, genetic testing, and many other parts and conditions. All of these comprehensive success factors combined allow the facility and staff to strive for excellence. Therefore, I have become a strong advocate for IVF. RSC's IVF treatment not only results in a baby, but also reduces possible genetic disorders and abnormalities. Nowadays, as women become more & more active in the professional world, and as a career woman myself, my advice to other intended mothers is to "choose wisely, and choose with responsibility". Choose the right medical center for your baby.

disease, such as cancer! So, it is really like a battle, a lengthy nasty battle that you fought and won! Therefore, don't be ashamed, please wear IVF as a "badge of honor," you fought the battle and you fought well!

Also, to you IVF children, if you are looking for local hero – don't look at the guy at the local gym or your football coach – please look at your own mom. She is the real hero here! You have no idea what she went through and how much courage it took to get you HERE!



Causes of infertility

U terine factors, endometriosis, diminished ovarian reserve, ovulatory dysfunction, tubal factor, hormone/immune factor (like women with thyroid disease or other immune issues), male factor (32%), other/unexplained (18%).



Mark and Stacey G., New York, NY

"We couldn't be more pleased with the RSMC staff and our outcome! We are so thrilled to have 2 healthy babies from just 1 viable embryo! What a tribute to the extraordinary skills of the doctors and the whole RSMC staff. We wouldn't go anywhere else if we try again, and will continue to refer our friends and rave about our experience. Thank you for our miracle babies! Without you, our family wouldn't be the same. We will forever be grateful!"

Factors Needed to Successfully Achieve a Natural Pregnancy

- The ovaries have a reserve of good quality eggs.
- The eggs must be ovulated each month, corresponding with intercourse.
- The fallopian tubes must be open, healthy and clear of blockage.
- Sperm count has to be high and the sperm of normal quality.
- The egg and sperm must meet and fertilization occur.
- The embryo has to develop and be genetically normal.
- The uterus must be able to accept the developing embryo (thick and sticky), not inflamed.
- Hormone levels have to be sufficiently high to support the pregnancy; antibodies have to be regulated (not attacking embryos or uterus, etc.).



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The Treatment Process

The First Step: Consultation With the Doctor

Our doctors would cover the questions below to detect the likely clues to your infertility issues before the work-up:

- Your period
- Your ovulation schedule
- Health problems and surgeries
- Medications
- Sexual history (sexual history, pregnancies, miscarriage, abortions, sexually transmitted diseases)
- Sexual patterns
- Lifestyle patterns for both partners
- *Note:* Don't worry too much. As with any other medical procedure, the doctors keep all information provided

confidential. They won't be surprised or judgmental about any of these issues. It only takes 10–15 minutes to go through a list like this.

The Second Step - The Basic Fertility Work-up

- Pelvic ultrasound examination examine any abnormalities of the uterus, fallopian tubes, and ovaries. The number of resting follicles in the ovary can be counted to indicate the potential response to the ovarian stimulation.
- Your breasts might be checked
- Ovarian reserves measurement FSH level, CCT, resting follicle count, AMH
- Blood test to measure hormone levels
- Check uterus and fallopian tubes see any blockage or inflammations or any abnormality
- Semen analysis

The blood tests for hormone levels – your body is a delicate balance of chemical processes, any imbalance in the endocrine system might contribute to the infertility.

- Follicle Stimulation Hormone the pituitary gland is trying to stimulate the ovary
- Luteinizing hormone
- Prolactin
- Estrogen
- Vitamin D
- Progesterone
- Testosterone







- Thyroxin
- Thyroid Stimulation Hormone

Semen analysis:

- Volume
- Sperm count
- Sperm motility
- Sperm morphology
- Antibody testing
- PH value
- Presence of debris or cells

In most cases, after these basic tests no further testing will be necessary. Some pregnancy methods can be attempted during the diagnostic phase, for example, IUI or intrauterine insemination. But in other cases additional tests and procedures are needed.

Hans and Filip

Hans and Filip, a gay couple living in Germany, always dreamed of having children but weren't sure where they would begin. After researching agencies in California, they found us!

After the initial inquiry and consultation, it was decided that Hans and Filip would both attempt to father their future child/children and use an anonymous donor and surrogate mother to assist them.

After a successful retrieval, it was determined that they had 8 beautiful female embryos! The transfer to their surrogate was a success and her first Hcg test confirmed she was pregnant! After 3 weeks and a confirmation of pregnancy, they began to plan for their family of 3, only to find out a week later that there was not a heartbeat after all. They were both devastated. They went through happiness to sadness in a week's time.

Once the surrogate recovered and Hans and Filip were ready to begin again, they transferred two female embryos and, once again, the surrogate was pregnant! Though the journey did not start out that great, the outcome was a beautiful, healthy baby girl!

Other possible tests:

- HSG common test to determine tubes are open, uterus cavity is normal
- Sonohysterogram similar to HSG, but only for uterus pathology
- Hysteroscopy treat uterine abnormalities such as polyps or fibroids (结节或小瘤)
- Laparoscopy usually reserved for people with severe pelvic pain
- Biopsy of the Uterus take a small sample of the uterus lining for examination under a microscope. To determine whether the lining if fully developed, detect infections and inflammation of the lining.

Blood test for women with history of miscarriage (two or more): Lupus,

certain antibody, certain genetic mutations. Identify immune or clotting disorder in the blood.

- **Genetic analysis:** A full chromosome analysis might be carried out to determine your genetic makeup (for some women who has unexplained infertility or repeating miscarriages). A simple blood test can detect extra or missing chromosomes, deletions/additions or rearrangements within the chromosome such as translocations.
- **Genetic test for men:** Sometimes genetic abnormalities can manifest in low sperm counts or no sperm at all. In addition, alcohol, smoking and recreational drugs could affect fertility as well as prescription drugs.

Some functional tests may also be performed, such as a "swim-up" (sperm penetrate a hamster egg—incubator environment).

Notes: Extended tests and correcting surgeries for infertility usually don't help a woman get pregnant; so it may be advantageous to start treatment rather than undergoing extensive investigation (after the basic workup). Couples usually don't want to undergo extended and expensive testing that does not change the ultimate treatment plan and





also waste precious time to get pregnant. Treatment with Clomid and IUI can be started immediately; while doing the additional testing. Sometimes couples bypass all of tests and IUI and jump to IVF directly.

The Third Step: Treatment Plan

Doctors will review all the test results and consult with the patients about the treatment plan while other staff members review the financials and other related information.

The treatment options: 2 or 3 cycles of Clomid IUI or highly medicated IUIs or directly to IVF, which depends on the women's age, medical history, patient preference and financial constraints.

• IUI – Intrauterine insemination – semen gets washed and cleaned before injection into the uterine cavity. IUI can only be used if the fallopian tubes are open and ovulation occurs. If the sperm counts are low, IUI could help. But in general, it only increases the chance of natural conception by 10%. Medicated IUI are similar to natural IUI. They have a higher success rate than natural one because the sperm is concentrated and there are more eggs. The downside is increased risk of a multiple pregnancy, especially when using injectable fertility drugs. This is why it is important to monitor the follicles develop in the ovary and, if too many developed, you might be advised to cancel the cycle and use a lower dose next time. Alternatively, an IUI cycle can be converted to IVF if there is an unexpectedly high number of eggs available.

Sample Fertility Treatment Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat	days I rememb
End of menstrual	End of menstrual	1	2	3	4	5	cycle (on a cyc Femara only—
cycle	oyae	CD 1	CD 2	CD 3	CD 4	CD 5	injectables req
				Day 1 Med	Day 2 Med	Day 3 Med	CD = Cycle Day
6	7	8	9	10	11	12	P4 Levels = Inc
CD 6	CD 7	CD 8	CD 9	CD 10	CD 11	CD 12	ovulation was
Day 4 Med	Day 5 Med						Med = Clomid
13	14	15	16	17	18	19	Cycle is based
CD 13	CD 14	CD 15	CD 16	CD 17	CD 18	CD 19	ovulation day
	OVULATION	1 DPO	2 DPO	3 DPO	4 DPO	5 DPO	days would ad
	DAY						are using ovula can begin takir
20	21	22	23	24	25	26	often do not g
CD 20	CD 21	CD 22	CD 23	CD 24	CD 25	CD 26	from ovulation
6 DPO	7 DPO	8 DPO	9 DPO	10 DPO	11 DPO	12 DP0	Pregnanc
	Bloodwork for P4 Levels						Ovulation
27	28	29	30	31			Baby Dan
CD 27	CD 28	Pregnancy Test	*Menstruation if				Menstrua
13 DPO	14 DPO	*Menstruation if not pregnant	not pregnant **Start of new cycle				Medicatio

January 2013—Sample Fertility Treatment Calendar

This calendar is just a sample of the days I remember agonizing over my cycle (on a cycle using Clomid or Femara only—cycles for IUI and injectables require MUCH more).

CD = Cycle Day DPO = Days Post Ovulation P4 Levels = Indicate how strong your ovulation was, or if you ovulated at all Med = Clomid or Femara

Cycle is based on a "normal" ovulation day of CD 14. Some people ovulate before or after this, and the days would adjust accordingly. If you are using ovulation tests, those you can begin taking CD 10 until you get a positive. HOWEVER, PCOS patients often do not get accurate readings from ovulation tests.

Pregnancy Testing Day
 Ovulation Day
 Bloodwork Day
 Baby Dancing Days
 Menstrual Cycle
 Medication Days

Skye and James G., San Diego, CA

"My husband and I struggled for over a year to have children before we went to visit RSMC. The IVF process is grueling on all parties involved. The center's staff were amazing. They made us feel right at home and so comfortable with the process. I was lucky enough to get pregnant the first time around. We had tried for so long on our own so being pregnant with Jagger truly felt like a gift. I cherished each and everyday of my pregnancy. Holding him for the first time was surreal.

"Two and a half years later Jagger is such a great kid and so smart! He makes us laugh each and everyday. He is quite the character. He LOVES music (it might be because of his rock star name or just a coincidence). He knows songs by heart and has some "mean" dance moves to go with them. He loves to read. He would much rather look through a book then play with most of his toys. He knows his ABC's and can count to 20. He can even count backwards (am I bragging). He is so active and daring and the most loving child I have ever encountered. He lights up our world and we are so thankful to have him."



3 Major IVF Protocols and IVF Process

The Stimulation Protocols

There are several different ways your doctor can choose to stimulate your ovaries for IVF treatment. These are called protocols – everyone might be different. Like fitting shoes, even though majority women fit in size 7-8, but there are 10% or more who need size 4–5 or size 9–11. It is very important that your doctor choose the right protocol for you and that he have a variety of protocols available to use. The protocol chosen can depend on how well you respond to one protocol, or, if this doesn't happen, then an adjusted protocol might be used (your cycle might be canceled and then restarted). Those protocols and adjustments depend the doctor's experience, work ethic and how well the infertility clinic is run.

Long Lupron Protocol: also called standard protocol or overlap protocol

- Birth control pills (overlap with Lupron) regulate hormones and synchronize the timing of the other drugs.
- Lupron (overlap with stimulation medication) on Day 21 of your cycle (or active pills). About 10 days. This drug acts on the part of your brain (pituitary gland) that stimulates the ovary but also suppress the ovary from ovulation. This way, the ovaries to recruit multiple follicles instead of the single one during the natural cycle.
- Suppression check
- Stimulation medication (frequent ultrasound and blood tests for about 10 days during this) need see the biggest follicles are around 18-22 millimeters diameter size
- HCG mature the eggs and release them from the walls of follicles (40 hours)
- Egg retrieval exactly 36 hours after HCG
- Progesterone and estrogen supplementation
- Embryo transfer
- Continued progesterone supplement (estrogen supplement)

Short Lupron Protocol: micro-dose/flare protocol

This protocol takes advantage of the body initial response to Lupron (Agonist and also a suppression drug) as a surge in hormones that also stimulate the ovaries. This protocol is used for people who don't respond to long

protocol well and also help women with low ovarian reserves to get as many eggs as possible. This one might be the most potent protocol.

- Birth control pills
- Mini-dose of Lupron (3 days after the last pill and continued until the day of HCG). Lupron will prevent the premature release of the eggs.
- Ovarian stimulation (shortly after Lupron and overlaps it)
- HCG

THE IN VITRO FERTILIZATION PROCESS

Used as a remedy for infertility, a woman's egg cells are combined with a man's sperm cells outside the uterus. The fertilized egg is then implanted in the woman's uterus and, if successful, begins the pregnancy cycle. The first baby realized from this fertilization method was born in 1978.





3 Major IVF Protocols and IVF Process

- Egg retrieval
- Progesterone and estrogen supplementation
- Embryo transfer
- Continued progesterone supplement (estrogen supplement)

Antagonist Protocol

This protocol does not use Agonist drug (Lupron) because some women might not response well to long time suppression of the ovaries – especially for women with low reserves.

- Birth control pills
- Ovarian stimulation starts at the end of the pill cycle
- Antagonist (4–5 days after the stimulation drug until HCG)
- Egg retrieval
- Progesterone and estrogen supplementation
- Embryo transfer
- Continued progesterone supplement (estrogen supplement)

IVF Treatment Process

After your protocol and treatment plan is determined, the doctors and nurses will provide a detailed calendar and drug sheet to make sure you understand and can follow it easily.

- 1. Suppression and Developing Eggs (2–3 week phase) During this phase, IVF-ers take Lupron to shut off normal ovulation. They then take one or more super-ovulatory medications to stimulate the maturation of multiple eggs.
- 2. Retrieving Eggs (a 30 minute procedure) When the eggs are almost fully mature, an HCG (trigger shot) is administered, which will release them from the ovaries about 40 hours later. REs carefully time egg retrievals to happen just before ovulation (36 hours after the shot).
- 3. Developing Embryos (3–6 days) After the eggs are collected, they are combined with sperm in lab dishes

for fertilization. ICSI – the process of injecting a single sperm into an egg to jump-start fertilization is used frequently.

- 4. Transferring Embryos (15–20 minutes procedure)
- Preparing the Uterine Lining (2–3 weeks) -Right around transfer time, women begin daily injections of progesterone to enrich the uterine lining and prepare it for incoming embryos.
- **6.** Taking the pregnancy Test usually 11–14 days after the transfer date.









The Lab

any of you might recognize the importance of a doctor, but may not fully appreciate the importance of the lab! But in the case of IVF, the lab might account for 30–40% of the success here! So, if you are considering IVF, it is important to make sure that the lab you choose is well qualified! The lab is the place that the egg and sperm meet and get fertilized. Then the resulting embryos are grown for up to 6 days before the chosen one or ones are placed back to the mother or carrier's womb.

Although clinics have their own criteria for who qualifies for blastocyst transfer, some clinics discourage transferring blastocyst stage embryos simply because the lab may not have the capability to support good embryo growth.

Another indicator of lab quality is whether the lab has a full-time lab director and a good embryologist. The

director should have good credentials and be at the lab full-time. If you check those important facts, you may be surprised that most clinics in United States can't afford a full-time lab director or the leading physician simply assumes the directorship on paper. Most Lab Directors cover 15–20 labs and are compensated for providing the rubber stamp signatures for regulatory agencies.

IVF Lab Procedures:

- **First 3 days, embryos grow in a culture media** designed to mimic the fluid in the fallopian tubes. Then the embryos are transferred to different culture media, which is formulated to mimic the uterine environment.
- **Day 5-6**, the lab offers extended embryo culture to grow them to the blastocyst stage.
- **Blastocyst stage embryos offer several advantages over the day 2–3 transfer embryos** – day 3 embryos should already started dividing, but only have 6–8 cells. Blastocyst stage (day 5–6) have 80–120 cells. By seeing the difference in the quality of embryos the doctors can transfer the strongest and ensure the best possibility of good result.

Also, for blastocyst stage embryos, PGD can be performed. PGD - Pre-

implantation Genetic Diagnosis on embryos. This test is similar to the screening run during the pregnancy – it's a genetic screening to rule out some genetic disorder.

- Cryopreservation freeze biological material for future use: embryos, sperm, and human eggs are frozen in a liquid nitrogen tank that can be stored indefinitely (there is no biological activity or degradation at such low temperatures). Studies show there is no difference or risk to babies born via this method.
- **Vitrification** at our clinic we use this newer method of freezing. Why? Because vitrification uses higher concentrations of cryoprotectants and is more efficient at removing the water from the egg shell. This coupled with the faster freezing rate, allows the eggs to be further protected from the damaging effects of the freezing process.

Fish vs. CGH (chromosome testing)

• An older, outdated method of chromosome testing is FISH – this method has many limitations and has been superseded by another method known as comparative genomic hybridization (CGH). Our Lab uses the newer,



Nancy

Nancy, a single entrepreneur, wanted nothing more than to be a mother. But at the age of 42, she was without a partner or the ability have children. She turned to us for a surrogate, egg donor and sperm donor. After finding her perfect match, she was able to meet all three, prior to their cycle. It meant so much to her to be able to know where her child was coming from and made her feel that much more comfortable about the entire process. She remained close to her surrogate throughout the process and was by her side for the birth of her daughter. When she returned home to begin life with her new family, she was still able to update her surrogate on how their family was doing. They remain in contact still today.



better and more modern method CGH, not FISH.

- CGH has been heralded as a major infertility breakthrough. This genetic test of eggs and embryos offers more and precise information than in the past. The advantage is all 23 pairs of chromosomes can be tested (versus only a maximum of 12 chromosome using FISH) and the results are much more accurate.
- *Notes:* There are many indicators for the patients to look for to determine if the lab is qualified and you will be stunned to learn that over 70% labs can't offer up-todate service to support adequate embryos growth. For example, no support to Blastocyst stage embryo growth, no CGH, no PGD, no vitrification method to preserve embryos, etc.

Survey also shows over 80% clinics don't have a full-time lab director or the leading physician simply assumes the lab directorship on paper. This kind of setup means a rubber stamp on the lab work for most cases.

Irene & Nikolov

Irene and Nikolov wanted nothing more than to have children since they married. Irene got pregnant shortly after their first anniversary, but three months into the pregnancy, she found out there was no heartbeat. They were devastated. Irene got pregnant two more times after and couldn't keep the pregnancy long enough to birth either time.

After a consultation, Irene learned that her condition would not allow her to carry their child. They were heartbroken. They began to research surrogacy and came to our center. Irene and Nikolov reviewed many profiles before finding the one that was right for them. Irene went through her first egg retrieval and ended up with many beautiful eggs! She was so excited to finally be on her way to becoming a mother. She attended the embryo transfer with her surrogate and was amazed to watch two embryos (one boy and one girl) be transferred. There hope was twins so they were so excited to find out that they were pregnant and having the twins they always wanted!!

The pregnancy went well into the last trimester, but just shy of 36 weeks, their surrogate had her water break! Irene was on the first plane she could catch and went straight to the hospital. Not sure what to expect when she arrived, she found her surrogate still in labor. She was so relieved to have made it in time for her babies to be born! Both babies were born healthy and were released. Their family went from two to four!





5 PGD – Pre-Implantation Genetic Diagnosis





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5 PGD – Pre-Implantation Genetic Diagnosis

Genetic Screening and Diagnosis

Preimplantation Genetic Screening – PGS is a genetic test carried out on IVF embryos before transfer. PGS does not diagnose any specific diseases but looks at the general makeup of the embryo. This test counts the number of chromosomes in cells taken from the embryo to ensure there are 46 – no more, no less.

PGS has shown to be beneficial for women with a history of recurrent miscarriage (has shown to reduce the miscarriage rate) and also beneficial for women of advanced maternal age or couples who had repeated failed IVG cycles.

It is possible to test on Day 3, Day 5 or Day 6 of development. The biopsy at this stage does not affect the embryo's development, there is little effect on its growth, although some survey says it slows down the growth slightly.

PGS Pros

- Allows doctors/lab staff to identify normal embryos for transfer, increase the success rate of implantation and reduce the miscarriage rate. It can also prevent disease such as Down syndrome.
- Actually saves money from failed cycles, failed pregnancy or future sick kid.
- Provides information to help make decisions for future treatment.
- Provide peace of mind.

PGS Cons

- Cost money
- Take some time (might need frozen)
- Some women want to take chances ... Sometimes it just takes your hope away (even though it might be a false hope).

PGD – Preimplantation Genetic Diagnosis

PGS only counts the number of chromosome, but PGD identifies a specific disease in the embryo. Genetic diseases are often caused when a gene mutates or the instructions have become misspelled on DNA. This type of genetic diseases are called single-gene disorders. PGD can help to eliminate this disease from the family for the future generations. Accuracy of the results is close to 100%!

Christy K. El Cajon, CA

"RSMC is absolutely amazing and this review is long overdue! After 5 failed IUI attempts at a not to mention clinic in San Diego we were referred by a friend to RSC. My wife and I had a consultation with Dr. Wood and fell in love with his laid back gentle demeanor right away. We got pregnant on our FIRST IUI treatment with Dr. Wood and had our first daughter in June 2010. Fast forward 1 1/2 years and we were ready to try again but we were in a predicament this time! We only had one vial of sperm left and we wanted our children to be full biological siblings. So after another consult with Dr. Wood he suggested we go IVF this time due to my wife's age and only having one try available. So we had a lot to think about and finances to go over and finally decided to go ahead and do IVF. The whole experience was just amazing and incredible and they do everything right there in the office, no going to other places for part of the procedure like you would have to do at most other fertility places, everything is in house. Our first IVF and final try we got pregnant with our second daughter and she was born on 12/12/12. The whole staff at RSC are the nicest people from the time you walk in the door until you leave everyone greets you with a smile and conversation, very warm and welcoming. Seriously without a doubt we could not have had a better experience anywhere else and have been blessed with two of the most beautiful amazing little girls and we could not be happier!

I could go on and on but the fact that you are even on here reading reviews just do yourself a favor and at least go have a consultation with Dr. Wood. If you are serious about having children this place has changed our lives forever and it could yours too!"

In PGD testing, cells are removed from each embryo during early development then the DNA is multiplied many times. The result will confirm whether a particular embryo is carrying the defective gene or has normal genetics.



5 PGD – Pre-Implantation Genetic Diagnosis

PGD can detect:

- Cystic fibrosis
- Sickle cell anemia
- Tay-Sachs disease
- Myotonic dystrophy
- Muscular dystrophy
- Fragile X syndrome
- Spinal muscular atrophy
- Hemophilia
- Down syndrome
- Detect the gender of the baby

NGS – next generation genetic sequencing, which will provide more

information than CGH. This test may be able to detect behavioral disorders such as autism.

Shawn R. San Diego, CA

"We went to Reproductive Sciences Center last year and had an amazing experience. Their staff is super friendly and the lab staff really know how to explain everything so we understood it. Dr. Adams was amazing with us and really took extra time to keep us calm through what can be a pretty emotional time. She worked really hard to make sure we were successful. The only negative is that sometimes the parking lot fills up and you have to park in the underground structure, but it's attached to the building so it's not that inconvenient. I also liked that they have a Starbucks. We would make early appointments so we could justify our lattes."

PROCEDURE	DAY OF PGD									
IN PGD	0	1	2	3	4	5	6			
	Oocyte pick-up & fertilization (with ICSI)									
	Polar body (I (PB1 and simultaned sequent	PB) biopsy i PB2, busly or tially)		Blastomere biopsy (1 or 2 cells)		Blastocyst biopsy (>2 & up to 5 cells approx)				
	Gene analy	rtic sis		Genetic analysis	_	Genetic anal <u>ysis</u>	_			
				Embryo transfer (from PB analysis)	Embryo transfer (from blastomere analysis)	Embryo transfer (from blastomere analysis)	Embryo transfer (from blastocyst analysis			



Donor Eggs, Donor Embryos, Donor Sperm

The predominant factor of donor cycle is the age of the eggs. If the egg is from a woman in her 20s who has been through an intensive screening process, the success rate should be high. Of course there are other factors, such as the male genetic contribution and uterine factors, but the success rate of donor eggs is very high.

Billy C. San Diego, CA

"I went to RSMC with my partner as we are planning to start our family. They made us feel immediately comfortable with the process. We will be using a surrogate/egg donor to carry our baby. Dr. Woods was great – very friendly and helped us determine the best steps for us to take. Can't wait to add to our family with the help of Reproductive Sciences Center!"



Percentages of ART Cycles Using Donor Eggs, by Age of Woman, 2008





Gestational Surrogacy

t RSMC, over the 11 year life of our surrogacy program, we have a success rate of over 80% which is among the highest internationally. RSMC takes pride in our top quality surrogacy high success rate and we conduct the rigorous monitoring and control over the entire process.

What is Gestational Surrogacy?

Gestational surrogacy is a treatment option in which embryos created by IVF are transferred into the uterus of a woman genetically unrelated to the embryos. Surrogacy may be used in the following situations:

- Women without a functional uterus.
- Women with underlying medical problems which could cause great risk to mother or baby during pregnancy.
- Women with history of multiple failed IVF cycles without a known cause.
- When used in conjunction with donor eggs, to allow conception for gay individuals and couples.

The medical principles used in this treatment process are the same as those used in donor egg cycles with embryo transfer into the surrogate mother's uterus. The woman producing the eggs undergoes an IVF cycle. At the same time, the gestational carrier prepares her uterus for conception with estrogen and progesterone. The eggs are retrieved through a simple outpatient surgical procedure under light anesthesia. The eggs are then fertilized and the embryos are cultured for several days. On the day of transfer, the embryos with the highest pregnancy potentials are placed in the uterine cavity of the gestational carrier. The number of embryos transferred will be decided by the patient, doctor and surrogate mother.

RSMC is here to help intended parents to fulfill their family dream, and we have a proven track record of high success rate.



Lisa and Pete

Lisa and Pete were a couple that I had high hopes for from the beginning. They were a couple from Australia who had been married for about 10 years. They were very open from the start of the process why they were using a surrogate. Lisa had cancer, twice. She got sick for the first time six months after they were married. As soon as they found out it was cancer, they immediately made the decision to create and freeze embryos in case the radiation or chemotherapy damaged her eggs. They were young and both knew that they wanted children. So she went through two round of cancer and not only did she survived, she thrived.

But, once she was finally healthy and decided it was time to start their family, they realized their fears of the cancer and treatments damaging her eggs, were now a reality. However, she had frozen embryos! Which told her what her next step was going to be. She transfered her own embryos into herself four times. She became pregnant all four times, and all four times had a miscarriage. Now there was a new reality they had to face, she would not be able to carry their baby.

They did their research and ended up working with me. I was very grateful for this, as I know that I was not the only one they were considering and I know they were putting a huge amount of trust with me.



Surrogacy Program Step-by-Step

Step 1 – Stringent Surrogate/Donor Screening and Selection – 4% Approval Rate

Clinical Team

• Before you are even presented with a surrogate, our licensed clinical Psychologist controls the two day Psychological intake screening process ensuring your surrogate is psychologically capable and prepared to be a surrogate. At a 4% pass rate (due to our stringent surrogate screening) you can be assured that your surrogate mother will be fully educated, informed and psychologically competent to become a surrogate. The Psychologist ensures that only the most qualified women make it to the next step. This portion of the screening entails: standardized psychological paper/pencil testing, in-person clinical interview (which also includes the surrogate's spouse), a criminal background check (family background check) and home inspection (upon request).

Medical Team

- While the psychological assessment is occurring, all of the surrogate's previous birth and delivery records are reviewed by the head of our OB/GYN panel. This medical evaluation is done to check that there were no problems with any of her previous pregnancies and/or deliveries.
- After being cleared by our in-house Psychologist and OB/ GYN, our IVF Physicians conduct an IVF checkup, which includes a hysteroscopy. This allows them to examine the surrogate mother's uterus to make certain there are no preexisting medical issues that may cause problems during the pregnancy.
- Our Obstetrics & Gynecology (OB/GYN) and IVF Physicians (Reproductive Endocrinology & Infertility/REI) work together to ensure your surrogate is medically capable of becoming a surrogate. This stringent screening process immediately disqualifies 50% of the women applying to become a surrogate in our program.

Outcome – Three Tier Available Groups – 4% Passing Rate

- AAA Available, Active, A+ quality Ready for Matching
- AA– Available & Active Psychological Intake & Medical Evaluation
- A Active Surrogate/Donor Initial Intake

Jack and Alyssa, Dana Point, CA "Dear Dr. Wood,

Jack and I wanted to write today to say thank you. Three years ago you gave us our beautiful twin daughters Jacqueline Rose and Katy Bell. We had to use an egg donor but you didn't think a surrogate was necessary. I got pregnant on our second try and had no complications. When we came back to you last year to try for a third child, you said the frozen embryos we had in storage should do the trick. Of course you were right. We're so blessed to tell you that Jared Wade was born on April 2, 2009 at a healthy 9 pounds, 4 ounces and 20" long! Thank you so much! We will never forget you and will refer all of our friends to you and your amazing staff. Please pass along our gratitude to your miracle workers, Dr. Adams and Linda in the lab as well. None of our current happiness could have happened with you!"





Step 2 – Consultations with RSMC Expert Team

Medical Team

- IVF Medical Consultation
- OB/GYN Medical Consultation
- Psychologist Consultation
- At your initial free medical consultation, you will have the opportunity to meet with our IVF Physicians (REI's), OB/GYN's and our in-house Psychologist. You can view our medical facility and lab and meet everyone who will be involved with the surrogacy process.

Surrogacy Team

- We want to ensure that utmost privacy and discretion when working with our team. Our consultations take place in a private room in our medical center. This initial consultation will give you the opportunity to ask questions and address concerns in a personal yet private and confidential manner.
- These free consultations are with someone who has extensive knowledge and experiences with the entire surrogacy process, from the selection of your surrogate to after delivery support. Our surrogacy team has worked on over 200 successful surrogacy cases resulting in happy families and healthy babies.

Legal Team

• Before beginning the surrogacy process, you can have a oneon-one free consultation with our Attorney's specializing in Reproductive Law who will ensure you are legally protected during the entire surrogacy. This free legal consultation can help clarify any legal questions you may have about the process.

Step 3 – Surrogate/Donor Matching

Surrogacy Team

• At RSMC, we require a comprehensive matching process. All surrogates and intended parents are matched based upon detailed criteria received from both the intended parents and the surrogate. Profiles of surrogate will be provided to intended parents including photos, family condition, health condition, etc. If requested, an inperson meeting between the intended parents and the surrogate can take place before the match is official. These meetings are held in a manner to protect the privacy and confidentiality of all parties involved.

Chester and Beverly O., London, England

"My husband and I visited other fertility clinics throughout the UK and Europe. Nowhere did we find more optimism and confidence in our success than from RSMC doctors and the entire center staff. We know everyone says this, but our children really are the most beautiful set of twins ever born, but then maybe we're biased. We've been trying, everything, for more than 10 years. Our quest to complete our family is over, and we have Dr. Wood to thank. Who'd have thought we'd have to come halfway around the world to finish our family?



Damon and Rick, Los Angeles, CA

"When my partner and I decided we were ready to build a family, we didn't exactly feel 'welcome' by the first two clinics we visited. But when we met the great doctor and the rest of the staff at RSMC, we knew they were as enthusiastic about our family as we were."



Legal Team

•

Once you are matched with your surrogate, your comprehensive legal contracts will be drafted by our experienced legal counsel, providing clear guidelines for both parties. Once the contracts are finalized and notarized, our licensed Attorneys will hold all the funds due to the surrogate in their Attorney Client Trust Account. They control payment to your surrogate and ensure she is accurately compensated based on your notarized legal contract.

Step 4 – IVF Process/Medical Insurance

Medical Team

• The IVF process is controlled by our accomplished IVF Physicians (REI's) who have a surrogate/donor pregnancy success rate of over 80% for the last 11 years. With the extensive experience of our medical center, they will select a protocol that will produce the best results for your specific needs.

Dave

Dave came to us with a 5 year old daughter, Ann. He was a widower, whose wife was diagnosed with cancer while pregnant with Ann. She refused treatment so that there would be no effects on their baby. Once Ann was born, she began treatment, but it was too late. She died just after Ann turned 1. Dave was heartbroken and couldn't bear the thought of replacing her or having Ann grow up a single child. He decided surrogacy was his best option.

Dave searched the donor database for his donor and found one that very much resembled his late wife and his daughter, Ann. His search for the right surrogate went on for over a year. But in the end, he found his donor, found his surrogate and had a boy. Ann was a big sister and he had a son!

- The IVF Physician will monitor your surrogate to ensure she is taking all medications as directed in order to prepare for the embryo transfer. Your IVF Physician (REI) will issue a calendar indicating medical protocols and providing the dates for the upcoming cycle (start of medications and the embryo transfer date). Your surrogate will be monitored by the IVF team until the 10th-12th week of the pregnancy at which time she will cared for and monitored by our panel of OB/GYN Physicians.
- The staff at our medical center will also ensure that your surrogate is comfortable, treating her like one of the family. With our over 25 years of experienced we recognize that being a surrogate, especially for the first time, is not only exciting but can also be a little scary.

Clinical Team

- At this point, our Psychologist begins monthly support group meetings with your surrogate to ensure her wellbeing. In addition to the monthly support groups,
 - our in-house Psychologist will also provide individual attention to those who may need additional support and/or guidance.

Medical Insurance

• This is also when the surrogate Catastrophic Medical Insurance is established. This allows you and your surrogate to worry less and focus more on a healthy pregnancy.

Surrogacy Team

• Your personal Case Manager is in contact with your surrogate on a daily basis. They are ensuring





all medical and psychological support appointments are met, as well as the surrogacy guidelines as outlined in the surrogacy contract are being followed.

• Your personal Case Manager will be in continuous contact with you providing updates, guidance and support to you 24 hours a day.

Step 5 – OB/GYN Controlled Pregnancy Process

Medical Team

• Once pregnant, your surrogate will be released from IVF care to one of our dedicated panel of OB/GYN Physicians. They will care and monitor your surrogate for the duration of the pregnancy on a monthly/weekly basis. Unlike other OB/GYN's, you will directly receive intensive OB/GYN reports regarding both the fetus and surrogate condition.

Clinical Team

• Our in-house Psychologist monitors and supports your surrogate on a weekly basis. Also, in addition to the regular mandatory monthly support groups, your surrogate will have access to the Psychologist for additional support and/or guidance as needed or requested 24 hours a day.

Surrogacy Team

- Your personal Case Manager is dedicated to you and your surrogate 24 hours. We feel it is important you have someone available 24 hours should assistance be needed during the night (such as...the baby is coming!).
- In addition to the updates you will receive from the OB/GYN treating your Surrogate, your Case Manager will also keep you informed on the progress, funds, appointments and the status of legal documents.

Legal Team

• At confirmation of pregnancy (confirmation of pregnancy is confirmed once the surrogate has had an ultra sound showing a heartbeat[s]), our legal counsel will file the necessary paperwork for the Establishment of Parental Rights (also known as the Pre-Birth Order). This document names you as the legal parents and allows your names to be placed on the original birth certificate issued from the hospital and the state government.

A.B. La Mesa, CA

Dave came to us with a 5 year old daughter, A"Watching our boys age 15 and 12 collect their tennis trophies and thinking of you Dr. Wood (you'd never know they weren't A grade embryos LOL)!

Dr. Wood is a brilliant physician (to say the least) who we found to be extraordinarily kind, patient, persistent, gentle, funny, confident and wonderfully reassuring. After a single meeting, pregnancy was no longer an elusive gossamer if, but a solid, tangible, diaper-clad, when.

Words are not enough to thank you for delivering the goods (okay, sometimes they're the bads, but we still love them!). You (and your staff) are the best Dr. Wood!"



Jim LeClaire, Austin, TX

"I am enthusiastically offering this positive patient feedback on behalf of doctors and the amazing staff at Reproductive Sciences Medical Center in Del Mar. My wife and I dreamed of having children since we fell in love 13 years ago. When it was finally time, we tried and tried until we realized it just wasn't going to work the old-fashioned way (though we had a lot of fun!) We didn't have nearly as much fun with IVF, but the outcome was more amazing than we could have ever hoped for. Our 7 month old daughter Cherie is the perfect addition to our family and my wife and I couldn't be happier. Thank you RSMC!"



Medical Cost

• All medically related charges are reviewed, negotiated and pre-paid from your account by your Case Manager to the appropriate facility.

Step 6 – Delivery – Legal Establishment of Parental Rights

Medical Team

• Your surrogate's OB/GYN has been with her every step of the way. They are prepared and are now ready to guide you through the delivery process and answer your questions about having a new bundle of joy.

Surrogacy Team

• Your personal Case Manager, who has been with you from the start, will provide step-bystep guidance to prepare you for the delivery. Including travel timelines, encouragement and preparation for your step into Parenthood!

Attorneys

 Our legal team has prepared all legal documents in preparation for the birth of your baby. The Establishment of Parental Rights/Pre-Birth Orders are in place to assure that you are named on the original birth certificate and recognized as the legal parents. Our legal counsel will be in direct contact with the delivering hospital to ensure the hospital has all necessary documents.

Clinical Team

 Our in-house Psychologist will provide postpartum support for your surrogates after the delivery to check on her wellbeing and also offer additional support should the surrogate need or request it. Our Psychologist will also provide two months of additional support following the delivery.

Medical Cost

• Our team has been in contact with the hospital and medical providers to pay for all necessary services related to the surrogate's delivery prior to the delivery. This adds an additional peace of mind, allowing you

Mark K. and Trevor P., Los Angeles, CA

"Dr. Adams [the RSMC Laboratory Director] answered all our questions and gave us a great lesson in 'Embryos 101.' She was extremely thorough in her explanation of our IVF process and the decisions we would have to make. She gave us very solid and, ultimately, very successful advice! We are awed by our little miracle."



Lily & Dave

Lily and Dave had a 6 year old daughter and wanted to expand their family. But Lily had a very difficult pregnancy causing her to remain on bedrest for the majority of her pregnancy just to deliver safely. They knew Lily becoming pregnant again was not option for them. They searched for a surrogate on their own through an online forum, but had no luck finding someone they could trust and be responsible carrying their precious baby.

They then came to us in search of the right surrogate. Once they found the "right one" Lily began her treatments for her egg retrieval and their surrogate began her medications for the embryo transfer. They decided to transfer one boy and one girl embryo in hopes that one would take. Two weeks later the Hgc test revealed a wonderfully high number. Their hopes and dreams began to become reality, they couldn't help to think there were two babies. Heartbeat ultrasound confirmed there were twins!



to worry less and focus on the important things - your baby!

• As a reminder, the Catastrophic Insurance policy is in place to protect you financially should complications arise during the pregnancy and/or delivery.

Step 7 – After Delivery Support

Surrogacy Team

• Your Case Manager has been by your side from the very beginning of this long journey, but their job is not yet done. Your personal Case Manager can assist with locating a pediatrician as well as provide you with basic information on how to obtain your important documents, such as the baby's birth certificates and passports.



Cindy

Cindy and I had been emailing for several weeks, just going over the basics about surrogacy and the entire process. There was so much more to the process that she had imagined and she had many questions. Even after a few weeks of emailing there was not much that knew about her.

Over the course of time and a few meetings in person, I learned that she was an older, very prominent woman from China. She desperately wanted to have children, but due to her age she was not able to conceive. She had tried many IVF cycles herself, all of which ended with no success. Hence her need for a surrogate. She like many women in her situation were at first hesitant with me. But they soon understood that I was there to help and they put their trust in me.

To me Cindy was very brave. She was coming to the US from China, and spoke no English at all. Her husband was only in the US for about three days, and Cindy stayed behind with her assistant. Everyone is different, and I loved every client I had, but Cindy really touched my heart. She was so very sweet, and so very desperate to have a baby. Of the hundreds of families I worked with Cindy was the only client who met my children. We had dinner one night with several others, ten in total I believe. I will never forget when Cindy looked at my children, then I waited until she was done talking for the translator to translate for me. "I want what you have" is what she said. And her face was sad. I will never forget that moment.

Cindy went through two egg retrievals almost back to back. While Cindy prepared for the second egg retrieval the surrogate also prepared for the embryo transfer. The quality of the embryos were not very good so the doctor transferred three embryo's, and told us she had a 10% chance of a successful pregnancy. Over the next few weeks the surrogate had a few blood test, which were not too promising. A month after the embryo transfer was the day of the ultra sound, to see if there was a heartbeat. And there it was. Just a flicker, but it was there. Before the translator could translate that the doctor said, "Look, there a heartbeat", tears were rolling down her face and she was smiling. Usually, for me at least, the next nine months goes by quickly, but with Cindy it seemed like a long nine months. The pregnancy was "text book" and everything went good. Which I am grateful for to this day. As with any pregnancy there is the possibility of complications, issues or problems. For Cindy, who worried about every single minute detail, I don't think she would have been able to handle any more stress than she was already under.

While I offered to be at the delivery, she said she would go it alone (with her translator, who, poor thing, was not excited about seeing a delivery up close and personal). I think she wanted the privacy, she wanted that time alone with her baby. The delivery took place during the night, so I woke up a voice mail from the translator. Cindy's son had been born. He was almost 7 pounds and doing great. And, according to the translator, Cindy had not put him down since the nurse handed him to her. I didn't see Cindy or the baby after that, but we did communicate through email and phone calls. Cindy was definitely a "first time mom", worried about exposing him to something or someone who may be sick, or know someone who's sick.

Even now when I think back to the beginning, I am reminded of how brave she was and how happy I was that her story had a happy ending.



Fertility Factsheet

- **Our nation's father** George Washington did not ever have any children of his own even though Martha did have two kids from her first marriage.
- **Robert Edward** won the 2010 Nobel prize for medical for his 1981 work that produced the first In-vitro baby born in USA. It took 30 years finally make the real splash.
- Women born with those eggs contrary to what most people think, women are born with all their eggs and that is why they are, like other organs in the body, subject to aging process. An infant girl is born with 7 million eggs, but the number reduces to 700,000 by the time she reaches puberty.
- Each month only 1 egg matures, but hundreds of them (immature ones) also got washed off during menstruation. So, IVF does not reduce women's egg reserve, but only stimulates those immature ones to the mature stage all at once.
- **Egg quality and quantity decline significantly** as women age, even though individuals are different (could be better or worse than average).
- FSH/AMH indicate ovarian reserve, not the quality of the eggs.
- Younger women are more likely to have higher percentage of normal eggs, while older women have higher percentage of abnormal eggs.
- **Every month, the egg recruited by the ovary is random;** good quality eggs are not more likely to grow than poor-quality eggs are.
- **Eggs recruited during IVF are random** it's not a race where the good ones win.
- Lots of clinics just don't have a good lab to support blastocyst stage embryo development and can't do most of the tests.
- Male Infertility even though 1/3 of men are found to have some problems with their specimen; the male component does not contribute to the overall pregnancy as much as the egg. This is simply because women are born with those eggs, which diminish over time and are subject to the aging process. Men continue to make new sperm, so they don't have the same chromosomal changes with time that eggs have. It takes the man's body 12 weeks to make sperm. So, it is a good idea to adopt a healthy lifestyle 3 months before the conception.

Tests and surgeries for infertility usually don't help a women get pregnant, so it may be advantageous to start treatment rather than undergoing extensive investigation. Couples usually don't want to undergo extended and expensive testing that does not change the ultimate treatment plan and also waste precious time to get pregnant. Treatment with Clomid IUI can start immediately while doing the testing. This test also can be done in conjunction with an IUI. Sometimes, bypassing all of tests and IUI, jumping directly to IVF is the most efficient way.







Christy and Cherie

Chloe is the light of our life; with those bright blue eyes she just melts our hearts! From her silly antics to her fascination with learning new things she is so full of life. She enjoys building with her Lego's story time, playing outside with our dog and two cats and her new favorite movies are *Monster Inc.* and *Finding Nemo*. Chloe is outgoing and loves to be around other kids and takes very good care of her "baby," she will make an amazing big sister one day. We can't begin to thank RSMC enough for making our dreams of having children come true and for this little angel in our lives!

Alternative Therapies and Supports

Acupuncture:

Research studies show acupuncture, in combination with IVF, can increase pregnancy rates, increase implantation rates, reduce the risk of miscarriage, decrease the occurrence of ectopic pregnancies, and reduce stress.

At our clinic our treatments usual incorporate acupuncture into the entire IVF protocol and reflect these evidence while paying attention to each patient's individual needs along the way.

Acupuncture to preparing for a successful IVF cycle – ideally a couple of months (3 months) before you start, you can also change to a healthy lifestyle and take some supplements for improving ovarian reserve and egg/sperm quality.

Acupuncture during IVF:

- Improves blood flow to the uterus and ovaries to improve ovarian response to hormonal stimulation.
- Thickens uterine lining to encourage implantation at time of transfer and into early pregnancy.
- Decreases uterine cramping to encourage implantation and reduce miscarriage of the transferred embryo(s).
- Decreases cortisol and reduces stress levels to improve LH and progesterone production to develop fertile cycle dynamics.

Supplements for Improving Ovarian Reserve and Egg Quality

Although there is no magic formula to turn back the hands of time, there are supplements to improve the general health and fertility:

- Myo-inositol part of Vitamin B complex, a known insulin sensitizer
- Meltonin
- DHEA a hormone as a building block for reproductive hormones estrogen and testosterone
- CoQ 10 fat-soluble nutrient essential for energy production
- Fatty Acids such as omega 3 fatty acids
- Vitamin D

Manage Emotions and Get Supports

No doubt everyone's experience with infertility is different and all of us are brave enough to be here, to face this challenge. However, dealing with infertility is a challenging prospect for everyone to a greater or lesser degree. I hope all of you will go through it with sufficient support and guidance and even come out stronger than before. (That song – what doesn't kill us makes us stronger :o)

At our clinic, we create a "support group" type of environment to enable patients undergoing the process to meet and talk in a safe and confidential basis. Our medical coaches will help advocate for patients own care and help them become empowered with information and support. They will help patients to understand the process and give them hope; guide patients through an otherwise miserable process. Many times this will help to save their marriage as well as their family dream. This is life and beyond ...



Naomi P., San Diego, CA

"The office has provided the most pleasant medical experience I have ever had, with the best outcome I could have ever hoped for."

Complications From Fertility Treatments

Complications from fertility treatments are rare; nevertheless some people experience side effects.

Ovarian Hyperstimulation Syndrome (OHSS) – due to the nature of IVF stimulation, mild OHSS occurs in around 30% of all treatment cycles and is considered a normal side effect of ovarian stimulation for IVF. The symptoms are easily managed with acupuncture, over-the counter painkillers, dietary changes, and increased fluid intake.

Severe OHSS affects fewer than 1% of IVFers and also could be well

managed by acupunctures and medications. OHSS usually resolves within a few days after the eggs are retrieval. And pregnancy could exacerbate OHSS. So, sometimes, "freeze all embryos" is the safest option. Transfer is delayed until full recovery two or three months later.

Some symptoms associating with OHSS:

- Abdominal pain
- Nausea, vomiting and diarrhea
- Abdominal bloating and rapid weight gain
- Tight and enlarged abdomen
- Dark urine
- Shortness of breath

If you experience severe symptom like above, inform the clinic and you should be monitored closely until the symptom subside. Sometimes medical intervention is needed.

Alysia N. Temecula, CA

"As my son is now graduating from high school, I can't help but reflect back upon my journey to have a baby 19 years ago with the help of Dr. Wood. He is the most wonderful Dr. as well as kind, compassionate human being one could wish for when going through such an emotional time. We will forever be grateful to Dr. Wood for our miracle baby who will be headed off to college at UCLA in the fall."

But, the prevention is always better than CURE, so, during IVF cycle, the continuous and careful monitoring of stimulation response is required. Good clinic offer frequent ultrasound + blood tests to measure the ovaries' response to the stimulation drugs. The dose needs to be adjusted if the estrogen level becomes too high.

Other Complications – the complications listed below occurs rarely, especially in good clinic and with good doctors. It is not higher than your normal pregnancy condition.

- Complications from retrieval
- Ovarian twisting
- Ovarian cancer
- Cancellation of cycle due to low or high response to the medication, doctors might try another protocol, adjust the dosage, etc.

Infertility Psychological Effects and Support – Every couple experience up and downs, especially during the fertility treatment, but if you experience severely and long-term depression or pain, you should ask for help – mental illness professionals, peer supports, etc. Actually, we encourage everyone to get supports and help who go through our clinic and later to repay this kindness to others!

Multiple Pregnancy: usually should be taken care of by high-risk OB; take a wait-and-see approach (many pregnancies spontaneously reduce); and selective reduction. In 10–30% of multiple pregnancies, one or more of the





fetuses is spontaneously absorbed. Selective reduction involves an ultrasound-guided injection of a chemical into one of the fetuses that stops the heartbeat. It could be performed between 10-14/16 weeks of pregnancy. A high-risk OB performs this procedure only after a full evaluation of each fetus to determine if one is particularly weak, unusual or if there are indicators of chromosome abnormalities. Selective reduction carries 3-4% risk of losing entire pregnancy. Seems high? Compare that to the 25-30% risk of multiple pregnancy.

Complications of Pregnancies With Multiples

Complications increase with each additional fetus in a multiple pregnancy and include many medical issues that will be discussed

below. In addition to these, there is a higher incidence of severe nausea and vomiting, cesarean section, or forceps delivery. If you are pregnant with twins or more, or if you are at risk for a multiple pregnancy, you should be aware of these and other potential problems you might experience.

The Petersons

I remember during our first meeting the Intended Mother, Carol, was rubbing her gold cross with her fingers. John, the Intended Father, was doing most of the talking and Carol asked only a few questions. They were a couple that lived in France, were in their late 50's and had been married for over 25 years. We went over the normal paperwork and accounting statements. While we had been in contact for about two months, mostly emailing, this meeting felt very formal. I knew their story, and may be for them seeing me in person made that story resurface, as it was the reason they were here. They had two sons, and a wonderful life where Carol was able to stay home a raise her sons. Then, one day, both sons were killed in a tragic car accident. One was 17 and the other was 18. I could see they had told this story before, but even today, did not want to talk about it.

Their other heart ache was that they, before now, had thought that "this sort of thing" (IVF, surrogacy and egg donation) was wrong. That it shouldn't be done. But, after what I would assume was some soul searching, their need to have children outweighed that belief. They chose an egg donor, met with their surrogate and signed all the necessary paperwork. And it was done. They were moving forward to have a child with a surrogate mother and an egg donor. And while they were nervous, I could see they were happy about the choice they had made.

The embryos were a very good quality and their chance were very good. They were pregnant on the first try. Two heart beats. Two boys. They were over sea's when then news come through, and the doctor had contact them first. They were elated, but still cautious about upcoming twin pregnancy.

They knew that, with multiples, came more risk not only to their babies, but to their surrogate. Over the course of the pregnancy the surrogate and the Petersons developed a friendship. They would email and Skype often. The surrogate was wonderful, and they knew they were so lucky to have her carrying their children.

Two weeks before the due date, the surrogate was placed on bed rest to avoid early delivery as she was experiencing some signs of the onset of labor. Carol came immediately and waited by her side in the hospital for the next two weeks. John arrived a few days before the delivery so it was perfect timing. The delivery was smooth, both babies and the surrogate were doing great.

Carol and John came by the office before their long trip home to France. When I walked in the room, I couldn't stop starring at Carol. She had an ear to ear grin as all new mothers due, but she looked 15 years younger. Her cheeks were pink, her skin was glowing and her eyes were bright.

The boys were at her and John's feet all buckled into their car seats. Under several blankets with tiny blue hats on and they were sound asleep. They had stopped by to say goodbye and thank you. Their grateful smiles were sincere and genuine.



8 Frequently Asked Questions

What is infertility?

In general, infertility is defined as not being able to get pregnant (conceive) after one year of unprotected sex. Impaired fecundity is a condition related to infertility and refers to women who have difficulty getting pregnant or carrying a pregnancy to term.

Is infertility a common problem?

Yes. About 6% of married women 15–44 years of age in the United States are unable to get pregnant after one year of unprotected sex (infertility). Also, about 11% of women 15–44 years of age in the United States have difficulty getting pregnant or carrying a pregnancy to term, regardless of marital status (impaired fecundity).

Is infertility just a woman's problem?

No, infertility is not always a woman's problem. Both men and women contribute to infertility. Many couples struggle with infertility and seek help to become pregnant; however, it is often thought of as only a women's condition. A CDC study analyzed data from the 2002 National Survey of Family Growth and found that 7.5% of all sexually experienced men younger than age 45 reported seeing a fertility doctor during their lifetime—this equals 3.3–4.7 million men. Of men who sought help, 18% were diagnosed with a male-related infertility problem, including sperm or semen problems (14%) and varicocele (6%).

What causes infertility in men?

Infertility in men can be caused by a variety of factors and the first step in evaluation is typically a semen analysis. A specialist will evaluate the number of sperm (concentration), motility (movement), and morphology (shape). A slightly abnormal semen analysis does not mean that a man is necessarily infertile. Instead, a semen analysis helps determine if and how male factors are contributing to infertility.

Conditions that can contribute to abnormal semen analyses include:

- Blockage (obstruction) of the male reproductive tract.
- Hormonal factors affecting the formation and development of sperm.
- Varicocele (an enlargement of the veins within the scrotum).
- Certain genetic diseases (i.e., cystic fibrosis).
- Exposure to environmental toxins and excessive heat.

Mr. Wei

Mr. Wei was a single man, had never been married, but wanted a child. He did his research and found that there was an option through surrogacy and egg donation. He originally decided he wanted one boy so he chose his donor and met his surrogate and went forward with a cycle. They only transferred one embryo, since he didn't really want more than one.

His surrogate's Hcg numbers were unusually high for a first time test. Second Hcg was only higher. At heartbeat ultrasound, they were very surprised to find not one, but two heartbeats! He was happy, surprised and in disbelief that it seemed to split to create two beautiful babies, identical twins!

Though there is a higher risk with identical twins, he was determined to see his babies born. His surrogate successfully carried both babies to 39 weeks! His babies were born without complication and to make it even more special actually were born on his birthday. Mr. Wei received the best birthday gift ever!





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- Lifestyle factors (smoking, drinking, drug use, steroids, obesity).
- Cancer and other medical conditions and treatments.

What causes infertility in women?

Women need functioning ovaries, fallopian tubes, and a uterus to get pregnant. Conditions affecting any one of these organs can contribute to female infertility. Some of these conditions are listed below and can be evaluated using a number of different tests.

What things increase a risk of women's risk of infertility?

H., San Diego, CA

"We searched for the best assistance with our fertility issues and found it with Dr. Wood and his team. We could not have been treated better throughout the journey, which can be very emotional at times, but the care we received by Dr. Wood and his staff made all the difference. And, in the end, we were blessed with a beautiful and healthy baby boy!"

Female fertility is known to decline with age. Many women are waiting until their 30s and 40s to have children. In fact, about 20% of women in the United States now have their first child after age 35, and this leads to age becoming a growing cause of fertility problems. About one-third of couples in which the woman is older than 35 years have fertility problems. Aging not only decreases a woman's chances of having a baby but also increases her chances of miscarriage and of having a child with a genetic abnormality.

Aging decreases a woman's chances of having a baby in the following ways—

- Her ovaries become less able to release eggs
- She has a smaller number of eggs left
- Her eggs are not as healthy
- She is more likely to have health conditions that can cause fertility problems
- She is more likely to have a miscarriage
- Smoking
- Excessive alcohol use
- Extreme weight gain or loss
- Excessive physical or emotional stress that results in amenorrhea (absent periods)

How long should women try to get pregnant before calling their doctor?

Most experts suggest at least one year for women younger than age 35. However, women aged 35 years or older should see a health care provider after 6 months of trying unsuccessfully. A woman's chances of having a baby decrease rapidly every year after the age of 30. Some health problems also increase the risk of infertility, so women should talk to a health care provider if they have:

- Irregular periods or no menstrual periods.
- Very painful periods.
- Endometriosis.





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- Pelvic inflammatory disease.
- More than one miscarriage.

It is a good idea for any woman and her partner to talk to a health care provider before trying to get pregnant. They can help a woman prepare her body for carrying a pregnancy and delivering a healthy baby, and can also answer questions on fertility and give tips on conceiving.

How will doctors find out if a woman and her partner have fertility problems?

Doctors will begin by collecting a medical and sexual history from both partners. The initial evaluation usually includes a semen analysis, a tubal evaluation, and ovarian reserve testing.

How will the doctors treat infertility?

Infertility can be treated with medicine, surgery, intra-uterine insemination, or assisted reproductive technology. Many times these treatments are combined. Doctors recommend specific treatments for infertility based on:

- The factors contributing to the infertility.
- The duration of the infertility.
- The age of the female.
- The couple's treatment preference after counseling about success rates, risks, and benefits of each treatment option.

What are some of the treatments for male infertility?

Male infertility may be treated with medical, surgical, or assisted reproductive therapies depending on the underlying cause. Medical and surgical therapies are usually managed by a urologist who specializes in infertility. A reproductive endocrinologist may offer intrauterine inseminations (IUIs) or in vitro fertilization (IVF) to help overcome male factor infertility.

What medicines are used to treat infertility in women?

Some common medicines used to treat infertility in women include-

- Clomiphene citrate (Clomid[®]) is a medicine that causes ovulation by acting on the pituitary gland. It is often used in women who have polycystic ovarian syndrome (PCOS) or other problems with ovulation. This medicine is taken by mouth.
- Human menopausal gonadotropin or hMG (Repronex[®]; Pergonal[®]) are medicines often used for women who don't ovulate because of problems with their pituitary gland—hMG acts directly on the ovaries to stimulate ovulation. It is an injected medicine.
- Follicle-stimulating hormone or FSH (Gonal-F[®]; Follistim[®]) are medicines that work much like hMG. It causes the ovaries to begin the process of ovulation. These medicines are usually injected.
- Gonadotropin-releasing hormone (Gn-RH) analogs are medicines often used for women who don't ovulate



Mr. Hong

Mr. Hong was an executive for a major corporation. He was a single father of one daughter from a surrogate birth in 2012 and had a wonderful first experience. He was not in a relationship, since he was an accomplished business man, yet desperately wanted to expand his family. He found a new surrogate and egg donor to assist him, but after two attempts, they were unsuccessful. Mr. Hong was devastated. He wanted nothing more than to have a son and to have his son meet his ailing mother while she was still alive.

After another search for the perfect surrogate, he chose two donors for the next round. After two successful retrievals and an ideal first cycle with his surrogate, he got the news he was hoping for. He was expecting not one, but two boys! Twins!

Mr. Hong was so happy that his surrogate got pregnant on their first attempt and with twins!

Luckily for him, his surrogate had a wonderful pregnancy once again, and his twin boys were born healthy and even at term. He was able to take his boys home to meet his mother and his family was then complete!

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regularly each month. Women who ovulate before the egg is ready can also use these medicines. Gn-RH analogs act on the pituitary gland to change when the body ovulates. These medicines are usually injected or given with a nasal spray.

 Metformin (Glucophage[®]) is a medicine doctors use for women who have insulin resistance and/or PCOS. This drug helps lower the high levels of male hormones in women with these conditions. This helps the body to ovulate. Sometimes clomiphene citrate or FSH is combined with Metformin. This medicine is usually taken by mouth.

Marion J. Carlsbad, CA

"Excellent care, great support services, spent a huge amount of time with me and my husband as we weighed different options, and pregnant after transferring just one embryo! I can't think of a single negative thing or reservation about recommending Dr. Wood. Everything was great, which isn't easy in what can be a difficult process."

• Bromocriptine (Parlodel[®]) is a medicine used for women with ovulation problems because of high levels of prolactin. Prolactin is a hormone that causes milk production.

What is Intrauterine Insemination?

Intrauterine insemination (IUI) is an infertility treatment that is often called artificial insemination. In this procedure, specially prepared sperm are inserted into the woman's uterus. Sometimes the woman is also treated with medicines that stimulate ovulation before IUI.

What is Assisted Reproductive Technology?

Assisted reproductive technology (ART) includes all fertility treatments in which both eggs and sperm are handled outside of the body. In general, ART procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's body or donating them to another woman. The main type of ART is in vitro fertilization (IVF).

How often is assisted reproductive technology (ART) successful?

Success rates vary and depend on many factors, including the clinic performing the procedure, the infertility diagnosis, and the age of the woman undergoing the procedure. This last factor—the woman's age—is especially important.

According to the CDC's 2011 Preliminary ART Success Rates, the average percentage of fresh, nondonor ART cycles that led to pregnancy were—

- 40% in women younger than 35 years of age.
- 32% in women aged 35–37 years.
- 22% in women aged 38–40 years.
- 12% in women aged 41–42 years.
- 5% in women aged 43–44 years.
- 1% in women aged 44 years and older.

Please see RSMC success rates here...

- 75% in women younger than 35 years of age.
- 73% in women aged 35–37 years.
- 55% in women aged 38–40 years.





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- 44% in women aged 41–42 years.*
- 50% in women aged 43–44 years.*
- Women using Donor Eggs: 58% fresh 68% frozen.
- * 2 years combined (2011-2012)

What are the different types of assisted reproductive technology (ART)?

Common ART procedures include-

• Intrauterine insemination (IUI) in which processed sperm is injected directly into the uterus by-passing the cervix. Insemination may be combined with ovarian stimulation to increase the chance of fertilization of one or more eggs occurring inside the fallopian tubes.

Ned and Tammy Hand, Chicago, IL

"Like a lot of people, we were nervous about what we could afford when the news about the economy just kept getting worse and worse. But when we realized we had a financing option, and that it was so simple to use, we agreed we couldn't put off our family anymore."

- In vitro fertilization (IVF), meaning fertilization outside of the body. IVF is one of the most commonly used techniques in which eggs are combined with sperm in a dish in a laboratory. Once fertilization has occurred, the resulting embryos develop for several days before being placed into the uterus.
- **Intracytoplasmic sperm injection** (**ICSI**) is often used for couples with male factor infertility, unexplained infertility or for those patients with failed conventional IVF attempts. In ICSI, a single sperm is injected into a mature egg with a microscopic needle. Once fertilization occurs, the embryos are grown for several days and then transferred into the uterus.

When to consider ICSI?

- Male patients with a low or zero sperm count.
- Male patients with a high percentage of abnormally shaped sperm. This can result in poor sperm motility.
- Sperm that can't be ejaculated but can be collected from the testicles or from the epididymis where sperm is stored. This may be due to an irreversible vasectomy or injury.
- Sperm can't get to the egg at all.
- Sperm can get to the egg, but for some reason can't fertilize it.
- Inability to get an erection and ejaculation, due to spinal cord injuries, diabetes, or other health conditions.





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- Egg Donation is used for women with no eggs or unhealthy eggs. A young egg donor undergoes ovarian stimulation and an egg retrieval procedure to donate her eggs to another patient. The eggs are fertilized with the partner's sperm and resultant embryos transferred to the patient's uterus.
- A Gestational Carrier (gestational surrogate) is implanted with an embryo that is not biologically related to her, for the purpose of achieving a pregnancy for an infertile couple. It is recommended for women who have no uterus or for medical reasons are unable to carry a pregnancy. Couples undergo an IVF procedure and the resultant embryos are transferred into the surrogate's uterus.
- **Donor Sperm or Donor Embryos** for women who are unable to conceive using their own sperm or embryos.
- Assisted Embryo Hatching may be recommended for women who have failed IVF or for women over 35. During the initial stages of development, an embryo is contained in a layer of proteins known as the *zona pellucida*. For a variety of reasons, some embryos do not successfully hatch out of this coating and



subsequently cannot implant in the uterus. Assisted embryo hatching is a lab technique that was developed when it was observed that embryos with a thin *zona pellucida* had a higher rate of implantation during in vitro fertilization (IVF).

• **Preimplantation Genetic Screening (PGS)** and **Preimplantation Genetic Diagnosis (PGD)** are both IVF procedures designed to examine your embryos for chromosomal abnormalities. An embryo biopsy is

taken either at day 3 or day 5 to examine all 24 chromosomes—the 22 non-sex chromosomes plus the two sex chromosomes (X & Y) in time for your embryo transfer. PGSe and PGD will also identify the gender of the embryo if you are concerned with gender-based hereditary diseases or looking for "family balancing" options. There is a difference, however in the two procedures:

Preimplantation Genetic Screening (PGS) – is the proper term for testing for overall chromosomal normalcy in embryos. PGS is not looking for a specific disease diagnosis – it is screening the embryo for normal chromosome numbers.





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Preimplantation Genetic Diagnosis (PGD) – involves removing a cell from an IVF embryo to test it for a specific genetic condition (cystic fibrosis, for example) before transferring the embryo to the uterus. Screening for healthy embryos will increase the pregnancy success rate. The accuracy of these procedures is 99.9%.

- **Cryopreservation of Sperm**, commonly referred to as sperm freezing, is a procedure to preserve sperm cells. Cryopreservation can be used for sperm donation, or as a means of preserving fertility for men undergoing vasectomy or treatments that may compromise their fertility, such as chemotherapy and radiation therapy, as these therapies can seriously compromise or completely destroy fertility. Cryopreservation can also be performed on eggs, more commonly known as egg freezing.
- Human Oocyte Cryopreservation, commonly known as egg freezing, is a process in which a woman's eggs are extracted, frozen and stored. Later, when she is ready to become pregnant, the eggs can be thawed, fertilized by way of In Vitro Fertilization (IVF), and transferred to the uterus as embryos. The process includes one to several weeks of hormone injections that stimulate ovaries to produce multiple eggs. The eggs are subsequently removed from the body by transvaginal oocyte retrieval. The procedure is usually conducted under sedation. The eggs are immediately frozen. The egg is the largest cell in the human body and contains a high amount of water. When the egg is frozen, the ice crystals that form can destroy the integrity of the cell. To prevent this, the egg must be dehydrated prior to freezing. This is done using cryoprotectants which replace most of the water within the cell and inhibit the formation of ice crystals. With advances in egg preservation technology, the pregnancy rate when using a fresh or frozen egg is comparable.
- Frozen Embryo Transfer: Healthy embryos resulting from an IVF cycle that not transferred to the patient at the end of the cycle can be cryopreserved, or frozen, and stored. When the patient is ready to have another







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child, her embryo(s) are thawed and transferred to her uterus under physician care. This process is called a frozen embryo transfer (FET). Some women may freeze all good quality embryos produced in a fresh IVF cycle for FET at a later time. Women may choose this option for fertility preservation or because their hormonal profile and/or uterine lining is not optimal during a fresh IVF cycle. A patient preparing for an FET has blood testing and ultrasound scans that enable her physician to identify the appropriate point in the patient's cycle to transfer the embryo(s). Some FET patients may also take hormone medication to prepare for the transfer.

Microsurgical Epididymal Sperm Extraction (MESA) is a procedure used in conjunction with ICSI in which sperm from the male patient is obtained from the epididymis, an organ which is located on top of the testis where sperm collect and mature. If the epididymis itself is blocked or absent sperm can be extracted from the testicles. This technique is used for men with no sperm in their semen because of a blockage or an absence of the vas deferens (the tube which leads from the testis). The men may be producing sperm in large numbers, but because there of the blockage or absence of the vas deferens none will be seen in the semen. This condition is similar to a man who has had a vasectomy.





