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EDITORIAL

The Last Hope

Surrogacy they say is the last option for infertile couples.

Surrogacy is when another woman carries the fertilised egg of the intending parents. The child so born is the biological child of the intending parents as it is their eggs and sperm which is used.

Indian mythology has numerous examples of something akin to surrogacy, yet Indian society still frowns on the entire process. Ignorance gives rise to fear and it is fear of tearing the social fabric and understanding which causes Indian society to avoid surrogacy and surrogates.

Surrogates therefore serve a unique social demand and yet are society's outcasts. Most of the surrogates agree to carry a child for money. Yet it is not abject poverty which drives them but the need for a better, more financially secure future. Either their own or their children's.

We have seen a recent spate of articles in the 'liberated' western media lambasting the Indian surrogacy industry. Here we see a classical example of western morality clashing with Indian needs. 'Exploitation of the surrogate and intending parents' screamed headline after headline.

To uncover the facts behind the chaos, we sent our correspondents to different ART centres across five cities. The story which came out was of need and giving, of hope emerging from despair. The entire ART segment needs to be regulated and the much awaited ART Bill needs to see the light of day, but the government needs to also understand the desperation of people trying unsuccessfully for a child and how ART is their last hope. The law needs to be tough to curb exploitation, but with a humane touch.

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5 Exercises that help in infertility



Exercise is one of the most integral and fundamental aspects of the life. It keeps the mind and body healthy and improves the overall condition. Scientists and research associates have done immense study to understand the effect of exercise on the overall health and have found clear-cut correlation. Fertility and sexual health does not depend directly on the level of exercise. However, indirect benefits are certainly there. Physical fitness is necessary for a healthy lifestyle and adopting good practices help a lot in regaining stamina and rejuvenating the energy level. Along with proper treatment from good infertility clinics like International Fertility Centre, the five top exercises that help in fighting infertility are:

1. WALKING: The most important benefit of walking is, it is a slow and steady yet effective exercise. Walking reduces blood sugar level, increase the flexibility of joints, and enhance the metabolism and removes toxins from the body. All these play very important role in treating infertility. Regular walking in the early morning-hours helps in increasing oxygen level in blood thereby improving the overall fitness.

2. STRESS RELIEVING EXERCISES: Stress plays very devastating role in the problem of infertility. Dr. Rita Bakshi, a renowned name in the treatment of infertility suggests avoid the stress as much as possible. Yoga exercises, meditation and breath-control exercises makes the mind state calm and reduces anxiety. Practicing these exercises consistently for a long time would surely help a lot in treating the infertility problem.

3. AEROBICS: Aerobics increase the flexibility of joints and reduces the toxin level by sweating. They increase

the stamina and oxygen carrying capacity. According to experts, aerobic exercises are good for overall health and improving the fertility level. However, physician's advice is required before starting it.

4. CARDIOVASCULAR EXERCISES: Cardiovascular exercises increase the stamina and therefore play a major role in the physical and sexual health. It improves the blood circulation, releases joints, removes harmful elements from the body by sweating and makes the body light, swift and flexible. However, doctors must be informed by your cardiovascular exercise schedule, especially if you are undergoing the infertility treatment. Hormone levels get disturbed by the medication and therefore a lot of care is required.

5. SWIMMING: Swimming is one of the most beneficial exercises in the infertility problem. It is perhaps the safest exercise that builds the stamina and reduces toxic elements with utmost ease. Swimming can be continued even when you are undergoing the infertility treatment and there is always a positive impact on it. It recharges the complete body and has a lot of fun too!

The treatment of infertility takes a long time and therefore requires a great amount of patience. Exercises help in making the mind more stable and increasing the positivity. Try to make your lifestyle regular, disciplined and systematic by making a timetable of exercise, rest, diet plan and proper sleeping routine. According to Dr. Rita Bakshi of International Fertility Centre changing the lifestyle in a positive manner helps a lot in getting good results of infertility treatment. This plays a key role in the overall effectiveness and benefits of the medicines.



Fertility Enhanced; NATURALLY!

Nature is bountiful and there are natural remedies and aids which can even help one conceive. Apart from a balanced diet, a couple should take a daily multivitamin with folic acid and try to go organic and hormone-free when it comes to groceries as pesticides and unnatural hormones affect fertility.

Fatty fish like tuna, mackerel, shark, and farm-raised salmon have unhealthy mercury levels and should be avoided. Instead, have fruit and vegetables that are both colorful and high in anti-oxidants, such as: red capsicum, oranges, greens, mangoes, apples, figs, sweet potatoes and carrots. Nuts and high-calcium foods also aid conceiving. For women, pre-natal yoga and acupuncture treatment are relaxing and strengthen muscles to be used during childbirth.

However, keep in mind that several herbs have a contraceptive effect on women. High amount of cayenne, ginger, saffron, aloe and cinnamon affect fertility and should be had in moderation or in consultation with your doctor. Men should ensure they are getting the required quantity of vitamins B-12, C and E, along with zinc and selenium.

Natural Tips for Treating ED

Though considered a touchy subject, erectile dysfunction (ED) is nothing to hide or suffer from in silence for either a man or his partner. According to the US National Institutes of Health, the number of men with ED is between 15 million and 30 million and this number is only going up.

Fortunately, apart from prescription drugs, men have a variety of alternative and herbal treatments to depend on. For example, the use of the herb ginkgo biloba is shown to have been successful to treat ED. Ginkgo improves blood flow to the penile veins and arteries and does not have the side effects. Those with decreased libido can also take ginseng—a tonic herb capable of strengthening the body—which is also used as an aphrodisiac. Another natural aid to relieve ED is

amino acid L-arginine. It is used by the body to create nitric oxide, the chemical that relaxes blood vessels and in order to fight erectile dysfunction. L-Arginine is found in food sources such as meat, dairy products, poultry and fish.

However, before considering adding supplements and medications, men with ED should know that those who exercise regularly are less likely to develop impotence with age. Researchers at the New England Research Institutes of Watertown, Massachusetts, studied 593 men, aged 40-70 years, and found that men who burned at least 200 calories a day were less likely to develop ED than those who didn't. This means that even minimal exercise is helpful when it comes to maintaining a healthy sex life.



SURROGACY - A medical boon for childless couples



SELECTION OF THE SURROGATE MOTHER

Presently in India, the ART Bill to regulate surrogacy is with the Government, waiting to be introduced in parliament and is under consideration, and hence clinics follow the guidelines issued by the Indian Council of Medical for selection and screen-

ing of the gestational carriers. **Synchronizing the cycles of surrogate and egg donor:** This is important to ensure fresh embryo transfer. Here, cycles of the surrogate and egg provider (egg donor/genetic mother) are synchronized to prepare endometrium of the surrogate mothers, to receive fresh embryos created by using sperm and oocytes from egg provider. Building the surrogate's uterine lining with hormonal injections, the surrogate will receive estrogen orally, by skin patches, or by injections, and then progesterone to help prepare her uterine lining for implantation.

WHY SURROGACY?

Surrogacy is the medical procedure related to IVF when another woman carries a baby for a couple who are unable to conceive or carry a pregnancy themselves. This treatment is offered usually due to inability of the genetic mother to conceive or carry a child to term due to medical or other problems.

SURROGACY IS HELPFUL IN THE FOLLOWING CONDITIONS

- Recurrent miscarriages inspite of all possible treatments
- Repeated failures after IVF treatment
- Premature menopause often as a result of cancer treatment
- A hysterectomy, or a congenital absence of Uterus due to Mayer-Rokitansky- Kuster-Hauser syndrome (MRKH).
- Health conditions such as diabetes, hypertension, cardiac or renal disease, which makes pregnancy and birth dangerous.

ing of the gestational carriers. **Synchronizing the cycles of surrogate and egg donor:** This is important to ensure fresh embryo transfer. Here, cycles of the surrogate and egg provider (egg donor/genetic mother) are synchronized to prepare endometrium of the surrogate mothers, to receive fresh embryos created by using sperm and oocytes from egg provider. Building the surrogate's uterine lining with hormonal injections, the surrogate will receive estrogen orally, by skin patches, or by injections, and then progesterone to help prepare her uterine lining for implantation.

EGG RETRIEVAL, FERTILIZATION AND EMBRYO TRANSFER

The egg provider undergoes transvaginal ultrasound-guided egg retrieval during the period between day 11 to day 14 of stimulation, or when follicles reach 17 mm size. Egg fertilization is done on the same day of retrieval by fusing the sperm and egg, and embryo culture process is carried out for approximately 72-120 hours following egg retrieval. Embryos are transferred to the gestational carriers' uterus on day 2, day 3 or day 5 (Blastocyst).



ABOUT THE AUTHOR

Dr. Pratima Grover is a, Infertility Consultant at the **Kiran Infertility Centre, Hyderabad, India (KIC)**. She has trained in Reproductive Biology at the Cleveland Clinic, U.S.A., one of the top most Infertility Centre's across the globe. She is a Post Graduate in Obstetrics and Gynecology.

Q&A Ovulation and Fertility

How many times can I ovulate in a month and how many chances do I have to get pregnant per month?

You only ovulate once a month, which means you've only got one chance to get pregnant each month. Because, we don't know exactly when ovulation (your chance) occurs, it's good to have sex a number of times leading up to your projected ovulation date.

Can I get pregnant while I have my period?

It's unlikely, but not impossible. Most women don't ovulate until day 14 of their menstrual cycle (usually 6-10 days after their period ends). If you have a long period (more than six days of bleeding) or a short menstrual cycle (less than three weeks in between periods), then it's possible that your fertile time (starting at five days before ovulation), is very close to the end of your period.

How do I know I am ovulating?

If you've been charting your basal body temperature or paying attention to cervical fluid, than noting the proper change could indicate that you're ovulating. Otherwise, if you have a normal 28-day cycle, the best way to know is just to count. Most women ovulate around day 14 of their menstrual cycle and are most fertile just before that. Keep a calendar and follow your cycle closely.

How can I increase my chances of getting pregnant?

Healthy, non-stressed women conceive more easily. To boost your chances, eat a healthy diet, exercise regularly, keep your weight under control, cut back on alcohol, quit smoking, and try and relax. Don't put pressure on yourself. It will happen!

How can I tell if I'm pregnant?

The best way to know is to take a home pregnancy test or have your doctor confirm it with a blood test. If you want to stay home and play the "maybe I'm pregnant" game, here are some signs that may mean you're growing a baby: swollen breasts, nausea, sensitivity to odours, frequent urination, light spotting, and abdominal bloating. Mood swings due to a hormone shift could also be a good sign.

Ovarian Cysts and Endometriosis

Ovarian cysts are fluid-filled sacs similar to blisters that are situated within or on the surface of an ovary. Many women develop them during their reproductive years, and most women will have at least one during a lifetime. While most ovarian cysts are harmless and present little or no discomfort, some can produce life-threatening symptoms, especially if the cyst ruptures.

Often, women may not feel any symptoms from ovarian cysts, but in some cases they can experience symptoms similar to endometriosis, ectopic pregnancy, appendicitis or ovarian cancer. Menstrual irregularities, pelvic pain (during or before periods, during sexual intercourse or constant pain radiating to the back and thighs), nausea, breast tenderness, vomiting, and pressure on the bladder or rectum are some common symptoms.

There are three types of ovarian cysts,

including follicular or functional ovarian cysts, corpus luteal ovarian cysts and endometrioma or chocolate cysts. Endometriosis can cause complex ovarian cysts (endometriomas), commonly called chocolate cysts because they are filled with a thick chocolate-colored material. 60% women with endometriosis experience ovarian involvement. Small cysts are formed outside of the ovary, which enlarge and produce endometriosis of the ovary. Hormone stimulation during the menstrual cycle produces many small cysts that eventually occupy the normal ovarian tissue. They can rupture and eventually lead to severe pelvic pain.

Chocolate cysts and any other cysts can be dangerous, so it is important to contact a doctor as soon as possible if a serious symptom appears. It is always advisable to have a check-up once in a while.

The Effects of SMOKING on FERTILITY

Many people are aware that smoking can affect a baby's health. But less people know that smoking can also affect both male and female fertility. **Q u i t t i n g** smoking while

role in regulating the menstrual cycle and foetal development. Smoking can also lead to dryness of the vagina. Some studies suggest that smoking leads to the destruction of eggs while they are in the ovaries, which can result in a lower egg count. Smoking can affect the fallopian tubes, and even lead to diseases. It can cause genetic problems in eggs, thus harming the baby. It may also affect the implanting of the embryo in the uterus.

If this is not enough, smoking can cause problems with male fertility. There is evidence to suggest that smoking lowers sperm count. It may also affect the motility of sperm and lead to genetically abnormal sperm. To enhance chances of fertility, it is recommended that you quit smoking at least two months prior to trying for a baby. Smoking is highly dangerous for the foetus, and once you discover you are pregnant, you should quit completely.

How does smoking lead to infertility? Studies show that smoking may affect the release of the hormone estrogen in women. Estrogen plays an important



Frozen sperm as good as fresh for IVF

A recent found that frozen sperm retrieved via testicular biopsy is as good as fresh sperm in leading to a successful pregnancy through IVF. For IVF, viable sperm is extracted from the testicle with a biopsy. A single sperm is then injected into the egg. This is called intracytoplasmic sperm injection (ICSI). If fresh sperm is used in the ICSI procedure, then events concerning both partners have to be synchronized precisely to maximize the chances of a successful pregnancy. But if frozen sperm can be used, then this simplifies the overall IVF process considerably, from a number of angles. For instance, from the timing angle, the man can give his sperm in advance, and from the location angle, the biopsy may not have to take place at the same clinic as the one the woman must attend.

When the procedure uses fresh sperm, the man has to undergo the testicle biopsy either the same day or the day before the egg is retrieved from the woman, and this may not be convenient for them. For the study, 15 years of data from the Washington University Infertility and Reproductive Medicine Center was analyzed. Of 136 men who underwent ICSI, 84% of the procedures used frozen sperm and the rest used fresh sperm.

The researchers found that frozen sperm performed as well as fresh sperm in ICSI in terms of pregnancy success rate, despite there being a statistically significant difference in fertilization rate (frozen sperm 62%, fresh sperm 47%).



By Dr. Kiran D. Sekhar

How To Begin An IVF CYCLE



An IVF patient should call **KIC** on day 1 or 2 of her period. A nurse or a doctor will relay instructions as to when to come to the office for the first shots of IVF for an Antagonist cycle or visit on day 21 of menstrual cycle in case of a down regulated cycle.

IVF MEDICATIONS

Each patient's medication plan is individualized, but most IVF regimens include one or more of the following:

GnRH Agonist

GnRH Agonist is used to help create equally mature eggs. Some statistics indicate that GnRH Agonist may be associated with higher success rates and lower IVF cycle cancellation rates.

• HMG (Human Menopausal Gonadotropin), is administered by intramuscular injection

Recombinant FSH

This ultra-pure FSH product, currently available in India, is made by genetic engineering. From a treatment point of view, it will be similar to pure FSH in all respects. A **KIC** staff member will teach the patient and her partner to reconstitute the different medications and administer the injections at their places from a doctor, if the patient is from out-of-station. Most of the patients and their partners have little trouble getting used to the shots. Placing an ice-pack on the injection site, before and after the injection is given will help reduce any related discomfort. Patients must have their visit between 10:00 AM to 2 PM on weekdays and from 11:00 AM to 12:30 AM on Sundays to ensure consultation with the infertility specialist.

PATIENT MONITORING

Patients are usually asked to come in to **KIC** for blood tests and sonograms to determine the maturity of their developing eggs beginning on cycle Day 3, 5, 7 or 9. Further monitoring will be

carried out as needed until the eggs are determined to be mature. Occasionally, some patients will need to be monitored on a daily basis near the end of the ovarian stimulation phase of the cycle.

BLOOD TESTS

Patients usually receive 2 or 3 blood tests during the course of the monitoring process: Estradiol (Estrogen) and Progesterone. Estradiol allows us to approximate the relative maturity of the eggs. Generally, the tests will show between 100 and 200 units of estrogen for every matured egg. Progesterone tells us if the eggs are becoming overripe, the patient's progesterone level, which depends on the number of egg follicles created, should be below 2 units.

SONOGRAMS

The maturity of the follicles developing in the ovaries is monitored via vaginal ultrasound. During this painless procedure, a radiologist inserts a small probe into the vagina. This enables him/her to visualize the ovaries and the uterus, to evaluate the maturity of the Endometrium (the inner lining of the uterus), and to count and measure the follicles developing in each ovary. A mature follicle measures from 16 to 22 millimetres. An Advance technology of Color Doppler study is used at **KIC** to monitor the blood in the follicle and Endometrium.

THE FINAL STEP TO EGG MATURATION

When blood tests and sonograms indicate that the eggs are mature (18mm or more), the patient will be instructed to be administered a final injection called HCG (Pregnyl, Profasi) to complete the maturation of the egg. The HCG shot must be taken at **KIC, Hyderabad** between 9:30 PM and 11:00 PM on the date specified, and the retrieval will be scheduled for some 36 hours after the

HCG injection. For example, if a patient's Monday monitoring showed her follicles to be of the appropriate size and her estrogen levels were found to correlate with maturity, she would be instructed to take her HCG between 9:00 PM and 11:00 PM Monday evening. Her egg retrieval will then be performed on Wednesday morning.

The timing of the retrieval after the HCG injection is critical, since HCG may cause the egg follicles to release prematurely, making IVF retrieval impossible. Fortunately, this rarely happens.

BEFORE THE PROCEDURE

The patient will be instructed not to eat solid foods after midnight, prior to the procedure. It is advisable to abstain from sexual activity for two days prior to the procedure to ensure the highest possible sperm count from the male.

WHAT ARE THE CHANCES OF SUCCESS WITH IVF?

Here at Kiran Infertility Center (P) Ltd, the Overall Delivery Rate Per Egg retrieval until now was 41.33 %. Now with the advent of newer drugs & protocols, the Clinical Pregnancy Rate Per Egg Retrieval for 2009-10 was 45.33 %. Our ongoing pregnancy rate for 2012-13 is 43.9 % (CONFIRMED HEART BEAT/CYCLE).

FOR 3 CYCLES KIC's CUMULATIVE PREGNANCY RATES ARE AS HIGH AS 90%.

The specific chance of success varies with a number of factors including the indication for the procedure, the patient's age, the number of embryos transferred and a variety of other factors. Your chances of success with IVF will be discussed on an individual basis with a **KIC** fertility specialist. The success rate with IVF must be viewed considering the natural fertility rate in fertile couples that is approximately only 10% per month. Be mentally prepared to undergo at least 3 cycles at **KIC** so that you can be ensured of at least 85-90% success rate. Appropriate concessions are given in the financial aspect of treatment if you undertake 3 full cycles at **Kiran Infertility Centre**.

By Dr Pratima Grover

Why Are egg donors or oocyte donors needed for IVF and Surrogacy?

Egg donors are an essential part of Assisted Reproduction as about 30% of women suffer from infertility because of decreased or absent ovarian reserve. Some women may have a specific genetic condition such as cystic fibrosis or fragile x syndrome because of which they cannot have their genetically related babies.

Where do we get egg donors from?

Majority of the egg donors at KIC are through word of mouth and from information over the internet

Does KIC provide egg donors or do I have contact a third party egg donation agency?

KIC has a strong database of more than 300 Indian, Caucasian, Thai and African American egg donors. KIC

does not work with third party agencies.

Is egg donation affordable? What are the costs involved if need an egg donor?

Yes, egg donation is affordable but fees for egg donors vary based on their education and other qualities.

Are there Caucasian egg donors at KIC?

Yes, KIC has more than 150 Caucasian egg donors in their database.

Does KIC have Indian egg donors?

Yes, there are more than 100 Indian egg donors in the KIC database.

Does KIC have African egg donors?

Yes, there are African as well as African American egg donors.

Does KIC have Asian egg donors or Oriental egg donors or Thai egg donors?

Yes.

How do I go about IVF with egg donation at KIC?

The female undergoing this kind of a treatment undergoes what is known as a Down regulated cycle and this is to match the patient's cycle with the Donor cycle.

How do I go about Surrogacy with egg donation at KIC?

The process is similar to the IVF process with egg donation. The only difference is that the embryo is transferred into a surrogate mother instead.

What is the medical process involved in egg donation at KIC?

Controlled Ovarian Hyper-Stimulation (COH) to cause super-ovulation. For more information write to one of our Doctors at info@kiraniivfgenetic.com.

What tests are done on egg donors?

The tests include:

Fertility testing by hormonal assays and ultrasound
STD testing
Routine and advanced pathology
Genetic and chromosomal testing
Psychological screening and testing

What are the success rates at KIC with egg donation?

Success rates vary from cycle to cycle based on the number and quality of embryos transferred. At KIC, however the cumulative (5 cycles) pregnancy rates in IVF are 83% and surrogacy 94%.

How can I be an egg donor for KIC?

You have to send in your profile and you may write to us at info@kiraniivfgenetic.com.

How much do I get paid to be an egg donor at KIC?

The fees offered is confidential and may vary depending on your profile. You can write to us at - info@kiraniivfgenetic.com.

You can apply if you are a:

- Volunteer
 - Relative
 - Professional Donor
- Donor Selection is done on the following basis:
- Age less than 30 years
 - No Genetic/ chromosomal / Infectious history
 - Counseling and informed consent



ABOUT THE AUTHOR

Dr. Pratima Grover is a, Infertility Consultant at the **Kiran Infertility Centre, Hyderabad, India (KIC)**. She has trained in Reproductive Biology at the Cleveland Clinic, U.S.A., one of the top most Infertility Centre's across the globe. She is a Post Graduate in Obstetrics and Gynecology.



ASK DR SAMIT SEKHAR

Q. Why is Kiran Infertility Centre a better choice for surrogacy in India?

A Surrogacy delivers an opportunity for families with fertility difficulties, same-sex couples and single intended parents to possess their own genetically connected children by using services of a female parent and methods of assisted reproductive technology such as in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI).

Gestational surrogacy may be a means of carrying a baby which needs the implantation of many previously created embryos (embryo transfer) into a Surrogate Mother's womb (unlike the requirement for insemination of embryos inside Surrogate Mother's body in traditional surrogacy). An embryo formed using the method of in vitro fertilization (IVF) may be a product of incubation of retrieved woman's eggs in conjunction with prepared men's sperm fertilise in a petri dish. In cases of low motility sperm cells will be injected directly into the eggs using method of intracytoplasmic sperm injection (ICSI).

With our professional recommendation and coordination, you can start your own surrogacy (and/or donation) program at the Kiran Infertility Centre in Hyderabad, India

Our professional personal managers can guide you through the entire process accommodating your desires and providing you with as much data on your Surrogacy program. Our special package which offers 4 full ivf cycles in the advance and you pay again only at 6 weeks of a confirmed pregnancy. You will need to come back to India only twice: first time to deliver your biological material (Sperm and Egg) and second time to take custody of your newborn baby.

Our Clinic features a giant Data base of Surrogate Mothers and Egg/Sperm Donors who are previously checked up to satisfy the present Indian regulations on surrogacy. All our Surrogate Mothers and Donors have their own children and live in an environmentally friendly region.

We offer you full legal support, legal substance during your surrogacy (and/or donation) program and acquisition of all necessary documents for your newborn infant. Our IVF/ Surrogacy clinic provides best-quality medical services implementing revolutionary methods of assisted reproductive technology. Intended parents will undergo medical tests, start their ovarian stimulation and the process will take 8 to 15 days if you are using your own gametes and 3 to 5 days if you are using Donor eggs.





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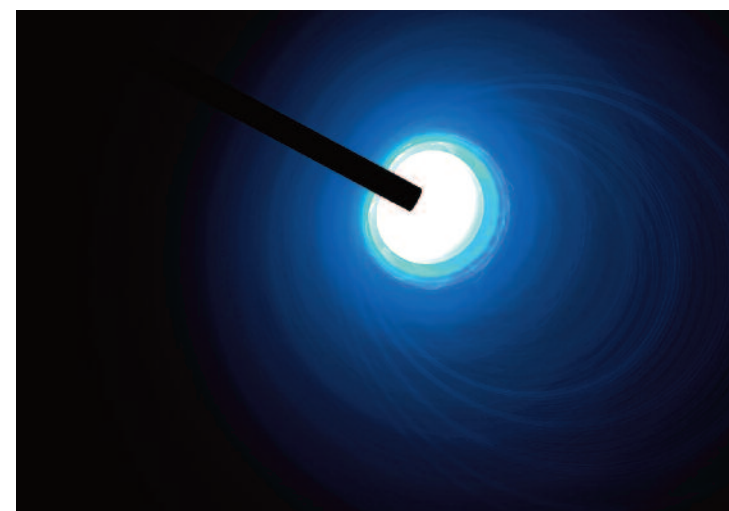
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Improve your chances of becoming a parent!

By Dr. Samit Sekhar



Blastocyst culture and transfer procedure for In-Vitro Fertilization (IVF) facilitates selection of the best quality embryos for transfer to the uterus of the mother. The concept of embryo quality is a very important one for couples experiencing infertility. With Blastocyst embryo transfer, it is possible to transfer fewer embryos, reducing risks for multiple pregnancies while keeping overall pregnancy rates high.

Blastocyst Culturing

Blastocyst culturing is a technique to grow embryos beyond the 3rd day of culture. Typically in an IVF setting the transfer of embryos into the uterus happens 3 days after the egg retrieval when the embryos generally are between 6-8 cells. When the embryos are cultured to day 5 they become around 120 cells which is known as a Blastocyst. As the newly formed embryo develops, it moves slowly towards the uterine cavity where it would ultimately implant. This process takes approximately 6-7 days. When the embryo reaches the "Blastocyst" stage, it is ready to implant.

Why should we consider Blastocyst transfer?

In certain patients, the advantage of Blastocyst culturing is to allow optimal selection of embryos for transfer, resulting in an increased implantation rate per embryo transferred. However, it is important to

understand that this technology may not necessarily increase your chance for pregnancy. The main advantage is that fewer embryos may be transferred to eliminate the possibility of triplet pregnancies, while maintaining a high pregnancy rate.

Is it for everyone?

No. Generally speaking, this procedure should be limited to patients with excessive numbers of embryos (greater than 10) in which case further selection of embryos beyond the day 3 stage would be advantageous. As a general rule, patients under the age of 37 are considered ideal for this culturing technique. This is not recommended to older patients because the risk of having no Blastocyst embryos

for transfer is too high.

What percentage of embryos will grow to the Blastocyst stage in culture?

For younger patients, up to 50% of all embryos will continue to grow to the Blastocyst stage. However, 10% of patients will not have an opportunity for embryo transfer due to the absence of Blastocyst development.

Are there any limitations to Blastocyst culturing?

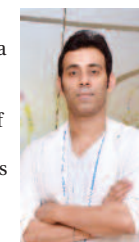
Yes, if you have less than four, 8-cell quality embryos on the 3rd day of culture, Blastocyst culturing is not recommended even if you desire it.

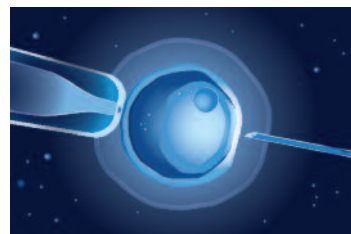
Would the embryos that arrest in culture prior to the Blastocyst stage have arrested in the uterus?

There is no clear-cut way to know this answer. Embryos that do not survive in culture would be less likely to survive or implant in the uterus.

ABOUT THE AUTHOR

Dr Samit Sekhar is the Executive Director of **Kiran Infertility Centre Pvt Ltd (KIC)** and holds a Master's degree in Andrology and Men's Health. He is also the Chief Embryologist at **KIC**. He has an experience of more than 7 Years in the field of Infertility and has helped more than 2000 IVF/ICSI Patients and hundreds of Surrogacy Patients from 21 different countries to have had babies through **KIC's** IVF and Surrogacy programs.





ICSI

Intra Cytoplasmic Sperm injection Boon for Male Infertility

Until the 90's, men with very low Sperm counts (less than 5 million per ml) or poor quality sperms had no hope of fathering their own genetic children. This problem was surmounted by the new breakthrough of ICSI, which took place in Brussels and Belgium in 1992. Since then millions of babies worldwide have been born with the help of this technique. In ICSI, all the steps are similar to the procedure of IVF, except the step of fertilization. Normally in IVF, one egg is mixed with 200,000 sperms and one of the sperms fertilizes the egg on its own. In contrast, in ICSI, each egg is held and injected with a single live sperm. This micro-fertilization is done with the help of a machine called the Micromanipulator. The procedure involves controlled Ovarian stimulation with drugs (GnRH) Analogues and Gonadotropins to produce multiple follicles which are then monitored for egg development by Vaginal

Sonography and serial estradiol hormone estimation. Next HCG injection (Human Chorionic Gonadotrophins) is administered when at least two leading follicles are 18 mm in diameter. Oocyte or egg retrieval is done under short general anesthesia, after 35 to 36 hours of HCG injection. The next step involves identification and isolation of eggs in the laboratory followed by collection of Sperm and processing in the lab. Hyaluronidase enzyme helps in splitting the cumulus of the eggs, which are then placed in small droplets of culture media under oil. Next, a microinjection needle is used for absorption of the immobile sperm into the needle after crushing the sperm tail portion followed by injection of the immobilized sperm into the held egg which are placed into the incubator for 2 to 5 days. After embryo formation 2 to 5 days after fertilization, good quality embryos are transferred back to the womb.

Men with low sperm count, very poor motility or high degree of abnormal sperms, lack of sperm in the semen can undergo this technique. ICSI can be performed in males with sperm anti-bodies, ejaculation dysfunction due to spinal cord injury or malfunction such as quadriplegics or paraplegics, and also those suffering from retrograde ejaculation (ejaculation of the sperm into the urinary bladder) and in instances where In-Vitro Fertilization has failed.

ABOUT THE AUTHOR

Dr. Kiran D Sekhar is an eminent Gynecologist and Obstetrician and "Medical Director" of Sai Kiran Hospital & Kiran Infertility Center, Hyderabad. Dr Sekhar completed her graduation and post graduation at the prestigious Osmania General Hospital Hyderabad, and has the unique and rare distinction of standing first in her M.B.B.S and her M.D. post graduate examinations. She was awarded 11 gold medals by then minister the honorable late Mr. Channa Reddy in the year 1972. Dr.Kiran Sekhar was also vice president of FOGSI- a body of nearly 20,000 Obstetricians and Gynecologists across India.



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Obesity doesn't reduce chance of getting pregnant with donor eggs



In women who use donor eggs to become pregnant through in-vitro fertilization (IVF), those who are obese are just as likely to become pregnant as normal weight women, according to a new report. Studies have shown that obesity is associated with lower chances of pregnancy using IVF, but most of this work

is limited to women using their own eggs. Research on outcomes for obese women using donor eggs has had mixed results.

The new analysis by investigators at Washington University School of Medicine in St. Louis and the University of California-Los Angeles pooled and analyzed data from more than 4,700 women in earlier studies. "Our study suggests that obesity does not significantly affect whether a woman will become pregnant with donor eggs," said first author Emily Jungheim, MD, assistant professor of obstetrics and gynecology at Washington University School of Medicine. "This supports the argument that doctors shouldn't discourage obese women from pursuing treatment if they need donor eggs to conceive."

Many IVF programmes have arbitrary body mass index (BMI) restrictions that help them determine whether women can receive treatment. These cutoffs, according to Jungheim, need to be re-examined. Obesity was also not found to be associated with differences in the rates of miscarriage or live birth among obese women who used donor eggs, when compared with women of normal weight.

However, reproductive outcome may be affected by female obesity. An analysis of almost 10,000 first cycles of egg donation treatment at one of Europe's largest IVF centres shows that female obesity reduces the receptivity of the uterus to embryo implantation and thereby compromises reproductive outcome. The investigators report that excess female weight "impairs human reproduction" and that "the reduction of uterine receptivity is one of the mechanisms involve". As a result they advise weight reduction before pregnancy in any type of conception, including ovum donation.

No link between fertility therapy and cardiovascular disease

Women who gave birth following fertility treatment had no long-term increased risk of death or major cardiovascular events compared to women who gave birth without fertility therapy, according to research by the Institute for Clinical Evaluative Sciences (ICES) and Women's College Hospital. The findings, published in the Journal of the American College of Cardiology, are the first to show that fertility medications, which can cause short-term pregnancy complications, are not associated with an increased risk of cardiovascular disease later in life.

"The speculated association between fertility therapy and subsequent cardiovascular disease is not surprising given that more women are waiting until an older age to have children, when they are at greater risk of developing heart disease," said Dr. Jacob Udell, lead

author of the study and cardiologist at Women's College Hospital.

Fertility therapy is known to cause short-term complications such as gestational diabetes and hypertension.



These short-term risks, however, do not translate into lasting cardiovascular damage. Researchers reported no increase in the risk of future breast or ovarian cancer in women who gave birth following fertility therapy.

Women who had fertility therapy also experienced fewer mental health events, including one-third the rate of depression and one-sixth the rate of self-harm.

One theory is that women who seek fertility therapy maintain healthier behavior after a successful delivery - a pattern that extends across age and income groups, the researchers say.

Understanding IVF

In vitro fertilisation (IVF) is perhaps the leading one among several techniques out there to help couples with fertility problems to become parents. When you are making an attempt to conceive through in vitro fertilization (IVF) you'll probably hear many ideas about what you'll do to improve your chances for successful treatment. IVF involves removing an egg from the woman's ovaries and fertilising it with sperm in a laboratory. The embryo is then placed back to the woman's womb to grow and change into a baby. Sometimes surrogate mother's services are used when the mother is not able to carry a baby for her own. This process is termed as gestational Surrogacy.

Here is an effort has been created to understand the facts that may help one understand what IVF is all about.

1. It was within the United Kingdom when the first IVF baby Louis Brown was born in 1978. This medical technique has given hope to various couples who wished to have babies of their own but due to circumstances, are unable to have a baby.

2. Today, in vitro fertilization or test tube baby has been used so widely that millions of babies have been born with this treatment till now. IVF is a methodology of assistive reproduction in which the man's sperm and the woman's egg (oocyte) are combined in a laboratory, where fertilization happens. The resulting embryo is then transferred to the uterus to develop naturally. Usually, 2 to four embryos are transferred with each cycle. IVF is a relatively simple procedure but is relatively expensive and hence not everyone can opt for it.

4. IVF is useful as a mode of treatment in cases such as Endometriosis, Low sperm counts, problems with the uterus or fallopian tubes, problems with biological process, the shortcoming of sperm to penetrate or survive within the cervical mucus and unexplained Infertility. Actually, the IVF treatment for infertility has several stages: Ovulation induction, egg collection, insemination and fertilization, and embryo transfer. In some rare cases, preimplantation genetic screening (PGD) to ascertain for chromosomal abnormalities.

5. Success rates for IVF depend on variety of things such as your age, the

quality of medication used, the condition of the laboratory and the skill and technique of the Clinician and Embryologist. Success rates decline sharply with age. For every a hundred women treated aged 35 and below, forty women will get pregnant; between thirty six and thirty eight around 20 will get pregnant; and at age 39 around ten will get pregnant. This can be because younger women tend to have healthier eggs.

6. The quality of the egg in women diminishes with the age. A woman's age is a major factor about the success of IVF for any couple. For example, a woman who is below age 35 and undergoes IVF includes a 39.6% likelihood of getting a baby, whereas a woman over age forty has a 10% chance. However, recently it's been found that the success rate is increasing in every age group as the techniques are refined and doctors become more matured.

7. The value of IVF Treatment will vary looking on where you live, the number of medicines you are needed to require, the number of IVF cycles you bear, and therefore the amount your insurer pays toward the procedure. Compared to the UK and USA, IVF treatment is far economical in India, and the quality of the treatment is superb.

8. Stress is a vital factor in the outcome of any IVF treatment. This can be an expensive process, thus financial stress also plays a significant role. 9. Quality of the clinic and its standards is very vital. Poor quality clinic with meagerly infrastructure is less likely to end in IVF pregnancies. Skill of the medical practitioner and his expertise play a significant role.

10. If a success is needed in an IVF cycle one should avoid alcohol and tobacco, medications, slim and maintain BMI, avoid caffeine or management its consumption, follow diet and take folic acid supplements. IVF treatment should be started early as age plays a vital role.

If you're below an age of 35 and unable to conceive maternally, then you'll attempt IVF for your infertility downside. The value of IVF is moderate. With IVF, you'll give birth to a healthy baby and it is estimated that about 63 percent are single babies, 32 percent are twins and 5-hitter are

By Dr Naresh Sekhar



triplets or a lot of. The in vitro fertilization technique for infertility issue is safe. With IVF, there's less possibility of undergoing surgery. It is also estimated that IVF technique has reduce the speed of surgeries by half. The end result that an IVF may rouse one or two is very satisfying. In vitro fertilization has no down facet. Whereas several complained of fatigue, giddiness and having abdominal cramps, these are solely normal and could last for 2 days at most. Getting enough rest and engaging in less nerve-racking activities can increase the success rate of an IVF procedure. In spite of all the toil and risks concerned within the process, the extraordinary invention of IVF maternity is just a blessing for those who are unable to conceive through the natural methodology.

ABOUT THE AUTHOR

Dr Naresh Sekhar is the Managing Director and Male Infertility Specialist for KIC, has an experience of more than 30 years in treating male infertility and responsible for furthering medical education in the field of infertility. KIC has trained more than 100 doctors in the field of infertility and



assisted reproduction. His leadership is the driving force, always egging Team KIC on to increase their overall standards to achieve better results and to provide better service.

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(Hope Diaries) Extraordinary IVF journeys @ KIC



Our journey with the Kiran infertility centre, started 2 years ago around Christmas time...

After 5 years of trying to have a baby here in Toronto, Canada we were looking for a miracle and we found it on CNN. We watched a show about the Kiran infertility centre and the possibilities of surrogacy in India.

We started trying for a baby in early 2005. After several months and many trips to our family doctor and specialist nobody could tell us why it was not happening. This is what all we tried:

- Chinese acupuncture
- Chinese herbal teas
- Naturopathy
- I had 3 different surgeries to see if there is a reason I could not get pregnant and nothing was amiss. Because of the surgeries, one of my fallopian tubes was damaged and it had to be removed.
- We tried one fertility clinic, but they were just way too expensive for us
- We moved to another fertility clinic where we attempted many IUI and had 2 unsuccessfully IVFs
- After 5 long years I was not only diagnosed with UNEXPLAINED INFERTILITY, but also we had to refinance our condo and take another line of credit to cover the medical expenses that were not covered by OHIP or our insurances.
- We also started to look into adoption, but with the wait-time and amount of debts we had the chances were slim.

So, another sad Christmas was coming and we were thinking if we should try one more time as we still had some money available to us from our line of credit, but we were really scared, as this was our last chance and if this did not work we had no more money. We knew that there are no guarantees... and suddenly we saw this show on CNN (you can probably watch it on YouTube).

My husband Glenn did all the research about different clinics in India and we contacted a few of them and then we received a message from Dr. Samit Sekhar

who is the program director at KIC and we really had a good feeling about him and the centre. We joined the clinic's online social networking page contacted other intended parents and received first hand information about them.

We spoke to Dr Samit many times over the internet and we received all the info we needed and in April 2011 we came to India. I came first and my husband joined me a week later, as he did not have much leave. Our experience in India was great, the staff was fantastic and everything went well, but our surrogate did not get pregnant, after receiving the news we were heartbroken, however we knew we had 4 tries, so we were just waiting and we trusted Dr. Samit and Dr. Kiran Sekhar very much. After a few long months in November 2011 we got the news that the surrogate was pregnant. It was the first

Christmas that was truly great for us! We were literally flying over the moon. During the pregnancy we were receiving scans and reports every 10 days and on June 20th the case manager Anjani emailed us that the surrogate was showing signs of labour. I flew to India on June 21 and our Zoe was born on June 22, well I did miss the birth, as the trip was so long, but it did not matter. We had a baby that we wanted for such a long long time. My husband came a week later and it took us exactly 6 weeks from the time Zoe was born to get all the paperwork done and on August 5 we returned to Canada.

Had it not been for the doctors and the staff at the clinic we would never had a baby. Our Zoe

will be 6 months old just before Christmas and there are not enough words to describe how much happiness she has brought to our lives.

We are planning a little brother or sister for our Zoe with the Kiran Infertility Centre and expecting some good news soon.

- Kate

QUICK FACTS

Parents: Kate & Glenn
Country: Canada
Doctor: Dr. Samit Sekhar
Clinic: Kiran Fertility Centre (P) Ltd., Hyderabad, India
www.kiranivfgenetic.com



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or say “no” to her for something we do not want her to do. Nicole was very shy or anxious around strangers, crying and clinging to us when we try to leave. Natalie is less shy and more friendly to almost everyone. Natalie will attend the Early Intervention program for the next 6 month, Marcia visits her every 2 week to help Natalie make her muscles stronger. Marcia is also very fond of Natalie. Both re-sponds very well to solid food. Mom

QUICK FACTS

Parents:

Country:

Doctor: Dr. Samit Sekhar

Clinic: Kiran Fertility Centre (P) Ltd., Hyderabad, India

www.kiranivfgenetic.com

offers them 2 solid food meals a day and a couple of snacks like fresh fruit, puffs, container baby food, yogurts, and cheese. They continue to have 3-4 bottles of formula a day. They are both happy girls who are into everything and they are just wonderful. We have been so blessed and will always be so grateful to Dr. Samit and our wonderful surrogate and all the team at *KIC*.

So Happy First Birthday to our precious little princesses. They are both happy girls and light up our lives every day. You really are the best thing that ever happened to us.

Recently we celebrated our princesses turning one year old. We had a party on a Sunday, not so long ago, with all our family members in a restaurant in town. Natalie and Nicole are changing every day when we look at them each morning. In just one year, they have transformed from completely helpless premature newborns into independent little children.

They are developing so fast now that we always see the differences in their behaviors and movements day by day. They both can stand up by themselves and Nicole can crawl everywhere very well. About 2 months ago, Mom erected a fence with some boxes in our living room to keep them safe, but sometimes Nicole climbs up and sits on the boxes so Mom made the box fence higher by adding some bags of diapers to prevent her from doing so. Nicole has even taken 2 to 3 tentative solo steps. Natalie's a little bit slower and is yet to take her first step but I'm sure she will catch up with Nicole in no time.

Natalie has 3 lower and 4 upper teeth but Nicole has only 2 lower and 2 upper teeth. They are so engaging with us, crawling onto our laps, playing peekaboo, hide and seek, and pat-a-cake with us every day. Both are starting to understand what people are saying to them, and they are using their newfound language skills to get the attention of those around them. Nicole is responding very well when we call her name

