



Exploring your path to Parenthood

By Dr. Amdii Ndayi

Becoming a parent is one of life's most meaningful milestones. Society places certain expectations on couples which vary across cultures. The journey to becoming a parent may be straightforward for some but conversely, for others, several unexpected obstacles make it an uphill task. This article covers what you need to know on your journey to parenthood and what to expect along the way. It will help you understand your options, answer the questions you didn't even know you had, and give you the confidence to move forward.

Today, intrauterine insemination, in vitro fertilization/ intracytoplasmic sperm injection (ICSI) with egg and sperm donation, surrogacy, and preimplantation genetic testing offers accessible pathways to parenthood for those who dream of holding a child in their arms. Whatever your circumstance, know this: you're not alone. You have several proven options that can help you create the family you've always desired.

For many couples, the most important step to take is deciding where to start. Most couples, either due to societal pressures, reliance on unorthodox medicine, religious approach or because of the stigma associated with difficulty in conception after marriage, often find themselves in a dilemma.

A journey of a thousand miles begins with a single step which, on the path to parenthood, means identifying the root cause of the delay in conception. The first ever consultation with a fertility specialist could, therefore, be filled with much trepidation. Couples are anxious to narrate all efforts made prior to their consultation with the expectation that the clinician will have the answers they have been waiting for all the while.

During these consultations, clinicians take you through the physiology of reproduction as well as the structural issues with your reproductive organs.

Male reproductive organs including the testes, epididymis, ejaculatory duct (vas deferens), prostate and the urethra and their functions are explained in exacting detail. Abnormalities in male reproductive organs can result due to disturbances in semen production or transport, the result being a spectrum of qualitative or quantitative sperm disorders that can

impair the potency of the man.

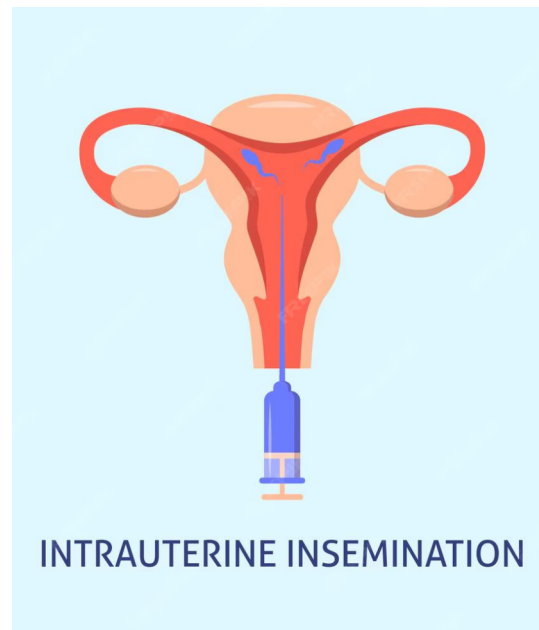
The female reproductive organs including the uterus and fallopian tubes are an array of tubular organs that serve as transport conduits for the male and female sex gametes (sperm and egg) to meet. The ovaries, one on each side of the uterus, serve as the site of production of oocytes (immature eggs) and largely determine fertility potential.

Understanding your options

Intrauterine insemination is a procedure which involves artificially transferring the sperm into the uterus of the female partner when she is most fertile. This is best suited for couples who have relatively normal parameters in terms of their egg reserves and sperm parameters, have been trying for more than a year and cannot get pregnant or live in different cities, or whose job demands do not enable them to have enough sexual exposure.

Sperm is washed, concentrated and rid of debris and then transferred into the uterus through the cervix of the woman after a few days of ovarian stimulation. This treatment option reduces the distance and obstacles the sperm cells must overcome to get to the egg.

In-vitro fertilization, also called IVF, is a complex series of procedures that can lead to a pregnancy. It is a treatment for



infertility, a condition in which you can't get pregnant after at least a year of trying. IVF also can be used to prevent passing on genetic problems to a child.

Nowadays IVF has gone a step further: in vitro fertilization involves a process where the eggs and the sperm are put in a petri dish and nature is allowed to take its course. However, current technology has developed ICSI (intracytoplasmic sperm injection) where sperm is directly injected into the cytoplasm of the egg to create the embryo. The introduction of this mode of treatment has brought succour to many couples, especially those with male factor problems.

During In-vitro fertilization, mature eggs are collected from ovaries and fertilized by sperm in a lab. One or more of the fertilized eggs, called embryos, are placed in the woman's uterus. One full cycle of IVF takes about 5 to 6 weeks, but sometimes the procedure is split into

different parts, and the process can take longer.

In vitro fertilization is the most effective type of fertility treatment that involves the handling of eggs or embryos and sperm. Together, this group of treatments is called assisted reproductive technology. IVF can be done using a couple's own eggs and sperm. Or it may involve eggs, sperm or embryos from a known or unknown donor. In some cases, a gestational carrier, someone who has an embryo implanted in the uterus might be used.

Your chances of having a healthy baby using IVF depends on many factors, such as your age and the cause of infertility. What's more, IVF involves procedures that can be time-consuming, expensive and invasive. If more than one embryo is placed in the uterus, it can result in a pregnancy with more than one baby. This is called a multiple pregnancy.

Intrauterine Insemination

What you need to know

IUI stands for intrauterine insemination, IUI works by putting sperm cells directly into your uterus around the time you are ovulating, helping the sperm to get closer to your egg. This reduces the time and the distance the sperm needs to travel, making it easier to fertilize your egg.

Before having the insemination procedure, you will be

asked to take medications that stimulate your eggs to grow, mature and eventually cause a "release" of your eggs. This is called ovulation induction. Semen will then be collected from your partner or donor.

It will go through a process called "sperm washing" that collects a concentrated amount of healthy sperm from the semen. Your doctor will then place the sperm into your uterus at a specific time when your egg is most likely to be fertilized by the sperm.

Your doctor will introduce a thin flexible tube through

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your cervix at a specific point in your uterus. The process is done under the guidance of an ultrasound scan. It is seamless, takes about 10 minutes and is usually not associated with pain. However, mild cramping after the procedure is not unusual.

IUI success rates vary significantly based on a woman's age. Generally, success rates are higher for younger women and decline with advancing age due to the natural decline in fertility and egg quality. Women under 35 often have IUI success rates between 10-20% per cycle, while those over 40 may see rates below 5% per cycle.

Sperm Donation

Who needs it?

Sperm donation is primarily needed by individuals and couples facing infertility or other reproductive challenges where the male partner's sperm is not viable or cannot be used.

While there are many effective treatment options such as IVF with ICSI which can help men with low or even very low sperm counts get pregnant, in some cases, a man may not be able to produce viable sperm at all (azoospermia). Autoimmune or genetic conditions can also obstruct the normal functions of a man's reproductive system.

Cancer treatment can also affect a man's ability to produce sperm. These patients can now form families with unsurpassed happiness and joy thanks to our sperm donation program.

Men who are carriers or have a family history of certain genetic diseases may choose to use a sperm donor to prevent passing the mutation onto the offspring. In such cases, sperm donation can provide an alternative solution and renewed hope for future parents.

Single women who choose to start a family on their own could use an anonymous sperm donor. This provides a clear path to parenthood without legal, personal, or custody complications.

Our sperm donation process is anonymous. Our donors are screened for infectious diseases, blood group, and genotype. This goes on concurrently with evaluation of sperm parameters for the count (density), motility (movement) and appearance (normal forms). Only samples that pass this screening tests will be used.

Our sperm samples are quarantined for an additional period of six months to ensure that viruses that may take longer to become clinically apparent can be detected and those samples screened out. This is a testament to how far our quality management processes go.

The donor's sperm is provided in a frozen state from the sperm bank well ahead of the egg retrieval day. In the lab, the sperm sample is first thawed and then evaluated for quality.

Only the best sperm is selected for fertilization of the eggs. Fertilization is accomplished by injecting single sperm cells into each egg. This procedure is called Intracytoplasmic Sperm Injection (ICSI).

Egg Donation

Who needs it?

Egg donation is the process of assisted reproductive treatment where a woman donates eggs to enable another woman to conceive. Usually, this type of treatment involves in vitro fertilization (IVF) technology with fresh or frozen eggs. There are several reasons why egg donation may be necessary.

Premature ovarian failure (premature menopause) occurs when the woman's ovaries stop functioning before the age of 40, meaning they can no longer

produce eggs.

Ovaries can also become damaged due to surgery, chemotherapy, radiation, or other medical conditions.

Chromosomal abnormalities can make it difficult or impossible for a woman to conceive with her own eggs or carry a pregnancy to term, while poor egg quality can affect the eggs' ability to undergo the process of intracytoplasmic sperm injection and fertilization. Repeated failed IVF cycles due to issues with egg quality or fertilization can also lead to the need for egg donation.

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Genetic diseases which can be easily transferred from parent to offspring can be prevented by the process of egg donation.

Egg donation is an anonymous service; donor selection occurs on a case-by-case basis matching the physical appearance and traits in the client as well as blood group and genotype to ensure a seamless process.

This is followed by screening for infectious diseases (HIV, hepatitis B and C, Syphilis). Eligibility criterion for donors includes women in the age range of 21 to 30 years. Women in this age group respond better to fertility drugs, and their eggs are of higher quality and quantity. The body mass index of intending donors should also fall between 18 - 25 Kg/m², this weight group represents the acceptable range with reduced

risk for complications. In rare cases, there is a risk of severe ovarian hyper-stimulation syndrome (OHSS). This complication occurs if the ovaries produce too many eggs. In our experience these complications have been reduced to the barest minimum by adopting the selection criterion described above.

Egg donation may become an emotional experience for the donor and recipient. Therefore, in addition to physical screening and testing, accurate psychological screening of all individuals involved is carried out in all our validated egg donation programs. Assessing the donor's mental health is critical to ensuring the health of the children and ensures that the donor makes informed decisions before the donation process begins.

The donor will then use a series of fertility drugs to stimulate the ovaries and produce several eggs at the same time. This condition is called ovarian hyperstimulation.

Shortly before removing the eggs, the donor takes the last injection of an ovarian stimulant drug to prepare for the egg pick-up process. The doctor removes the egg from the donor's ovaries by performing ovarian aspirations through the vagina. To do this, an ultrasound probe is inserted into the vagina, and using a needle, the egg is removed from each follicle. The procedure lasts 30 minutes and during the operation, the donor is given a painkiller, sedative, or anesthetic. Some women need a few days of rest to recover from ovarian aspiration surgery while others can resume their normal activities immediately after surgery.

Surrogacy

Who needs it?

Surrogacy is an arrangement where one person, the surrogate, carries and gives birth to a baby for the intended parents who are unable to do so. The most common form is gestational surrogacy, where the surrogate has no biological connection to the child, and an embryo is created through IVF using eggs and sperm from the intended parents or donors. The surrogate carries the pregnancy to term, after which the child is given to the intended parents.

The terminology used in the past "traditional surrogacy" where the surrogate had a genetic relationship with the child is no longer been used due legal and emotional concerns. It has now been replaced by "gestational carrier" where the surrogate has no genetic relationship to the child. At the bridge clinic we partner with reputable surrogacy agencies, to help deliver this desire for couples to become parents. However, if the intending parents desire to use a

gamete donor, we emphasize that one of the gametes either the "egg" or the "sperm" must come from one of the intending parents.

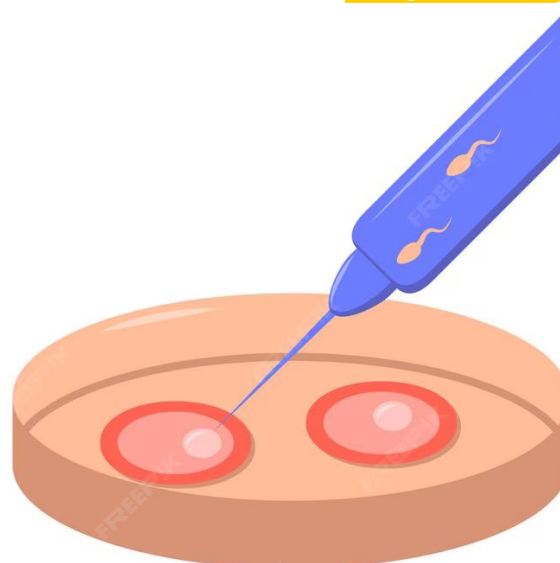
Surrogacy might become an option after repeated attempts at IVF due to a phenomenon called "recurrent implantation failure" (RIF), recurrent pregnancy loss (RPL), medical conditions like diabetes and hypertension that make pregnancy hazardous, hysterectomy (women whose wombs have been surgically removed), or due to a malformed or "missing" uterus. Single individuals who cannot carry a child can also use a surrogate to build a family.

A surrogate must be between the age of 21-38 years, is expected to have carried a pregnancy to term and had an uncomplicated delivery in the past. Due to the psychological demands and legal nature of the process, it will be required for the surrogate and the intending parents to undergo counselling to assess their readiness prior to initiating the process. The intended parents and the carrier must have a medical evaluation, including screening for psychological

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conditions and mental state.

The surrogate also undergoes a comprehensive medical examination to ensure that they are healthy to carry a pregnancy. The intending parents and the surrogate are also screened for syphilis, hepatitis B, Hepatitis C, HIV, the intending parent (male) sperm samples are quarantined for an additional period of six months to ensure that viruses that may take longer to become clinically apparent can be detected and those samples screened out.



IN VITRO FERTILIZATION

Invitro-fertilization

Who needs it?

In vitro fertilization (IVF) is a treatment for infertility and other situations where individuals or couples need assistance in conceiving a child. It is commonly used when other fertility treatments haven't been successful or when there are specific fertility challenges.

IVF can be a suitable option for a variety of individuals and couples, including those with blocked or damaged Fallopian tubes. In this case IVF bypasses the fallopian tubes, allowing fertilization to occur in the laboratory.

Endometriosis is a condition where a specialized tissue known as the endometrium which is found only inside the womb becomes present outside the womb, including the ovaries and fallopian tubes, causing infertility. IVF can help by retrieving eggs directly and facilitating implantation. IVF can be used in cases of male infertility when there are issues with sperm count, motility, or morphology. In disorders such as polycystic ovarian syndrome where women do not ovulate properly. IVF increases their chances of ovulating and generating eggs, embryos and achieving live births.

Women who are older may have a decreased egg supply or quality, and IVF can help them conceive.

Pre-implantation genetic testing

(PGT-A/PGT-M/ PGT/SR) - Who needs it?

Preimplantation genetic testing (PGT) is a genetic screening procedure performed on embryos created through in vitro fertilization (IVF) before they are transferred to the uterus. It helps identify genetic abnormalities in the embryos, potentially reducing the risk of implantation failure, miscarriage, and birth defects in the resulting child.

These genetic defects include a missing or an extra chromosome in the embryo (for example, Down syndrome), single gene disorders (like sickle cell anemia), or the rearrangement of genes, which can cause pregnancy loss and birth defects.

Preimplantation genetic testing refers to three types of tests that may be performed on embryos during the process of IVF.

PGT-A stands for preimplantation genetic testing aneuploidy. PGT-A is an analysis of embryo cells to determine if there is a normal number of chromosomes. An unequal division of either sperm or egg cells can result in an embryo having too few or too many chromosomes.

Most people have 46 chromosomes because they inherit 23 chromosomes from each parent. If an embryo or a cell is missing a chromosome or has an extra one, it is called aneuploidy. This study of chromosomes also provides other information including which chromosome carries gender determination. This knowledge is used to help couples balance their family to include both male and

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female children.

PGT-M stands for preimplantation genetic testing monogenic (PGT-M). PGT-M analyses for specific gene mutations that one (or both) of the parents is known to carry. A family background of genetic disorders in one or both parents can increase the possibility of a child being born with a genetic mutation. An example of such a genetic condition is sickle cell anaemia where both parents carry the “AS” genotype and have a 25% chance of transferring the “SS” gene to their unborn child. The application of PGT-M can help select embryos with either the “AA” or the “AS” genotype to be transferred into the woman's uterus.

Stories of Hope

Real families, real journies

Live birth represents the culmination of the end of a successful IVF journey. It is a measurable key performance indicator but to intended parents, it represents the end of a journey after overcoming a series of obstacles.

This discourse represents a summary of the various paths to becoming parents. The journey of a thousand miles begins with a single step.

Your path starts here...

