GIFT OF LIFE FOUNDATION

Assisted Reproductive Technology (ART)

What is ART?

Definition:

- ART encompasses all fertility treatments where both eggs and embryos are handled outside the body. It includes procedures like IVF, ICSI, and more.

Common ART Procedures:

- **IVF:** Fertilization occurs in a lab, and embryos are transferred to the uterus.
- **ICSI:** A single sperm is injected directly into an egg for fertilization.
- **FET:** Previously frozen embryos are thawed and transferred to the uterus.

Who Can Benefit:

- Couples facing various fertility issues, such as blocked fallopian tubes, male factor infertility, or unexplained infertility.

Success Rates

Factors Affecting Success:

- **Age:** Younger women generally have higher success rates.
- **Health Conditions:** Conditions like PCOS or endometriosis can affect outcomes.
- **Embryo Quality:** Higher quality embryos increase the likelihood of success.

Statistics:

- Success rates vary, but on average, IVF has about a 40% success rate for women under 35. This rate decreases with age.

Improving Success:

- **Lifestyle Changes:** Maintain a healthy weight, eat a balanced diet, and avoid smoking and excessive alcohol.
- **Medical Support:** Follow your doctor's recommendations and attend all appointments.

In Vitro Fertilization (IVF)

What is IVF?

- In Vitro Fertilization (IVF) is a procedure where eggs are extracted from a woman's ovaries and fertilized by sperm in a lab. The resulting embryos are then implanted into the woman's uterus to achieve pregnancy.

Who Needs IVF?

- Women with blocked or damaged fallopian tubes.
- Couples with severe male infertility.
- Those with unexplained infertility or who haven't succeeded with other treatments.

The IVF Process:

1. **Ovarian Stimulation:** Medications are given to stimulate the ovaries to produce multiple eggs.
2. **Egg Retrieval:** Eggs are collected from the ovaries using a minor surgical procedure.
3. **Fertilization:** Eggs are fertilized with sperm in the lab.
4. **Embryo Culture:** Fertilized eggs (embryos) are grown in the lab for several days.
5. **Embryo Transfer:** Healthy embryos are implanted into the uterus.

Success Rates:

- Success depends on age, health conditions, and other factors. On average, the success rate is about 40% for women under 35 and decreases with age.

Risks:

- Possible multiple pregnancies, ovarian hyperstimulation syndrome (OHSS), and minor surgical complications.

Frozen Embryo Transfer (FET)

What is FET?

- Frozen Embryo Transfer (FET) involves thawing and transferring embryos that were previously frozen from an IVF cycle into the uterus.

Who Needs FET?

- Couples with surplus embryos from a previous IVF cycle.
- Women needing to delay pregnancy for medical or personal reasons.

The FET Process:

1. **Preparation:** The woman's menstrual cycle is monitored, and the uterine lining is prepared.
2. **Thawing:** Frozen embryos are carefully thawed.
3. **Transfer:** Thawed embryos are placed into the uterus using a thin catheter.

Success Rates:

- Similar to fresh IVF cycles, with the benefit of reduced costs and less physical strain on the woman.

Risks:

- Similar to fresh IVF cycles, with potential for slightly lower implantation rates due to the freezing and thawing process.

Egg and Sperm Donation

What is Egg and Sperm Donation?

- Donated eggs or sperm are used to achieve pregnancy in individuals or couples who cannot conceive with their own gametes.

Who Needs Donors?

- Women with premature ovarian failure or poor egg quality.
- Men with severe infertility issues.
- Couples facing genetic concerns.

The Donation Process:

1. **Screening:** Donors undergo rigorous medical and psychological screening.
2. **Matching:** Donors are matched with recipients based on various factors.
3. **IVF/ICSI:** The donor's eggs or sperm are used in an IVF or ICSI cycle for fertilization and embryo transfer.

Success Rates:

- Often high due to the young age and good health of donors.

Risks:

- Similar to IVF and includes emotional and ethical considerations for both donors and recipients.

Nutrition for Better Fertility Outcomes

Balanced Diet

Why is a Balanced Diet Important?

- Eating a variety of nutrient-rich foods supports overall health and enhances fertility by regulating hormones and improving reproductive health.

Key Components of a Balanced Diet:

- **Whole Foods:** Include plenty of fruits, vegetables, whole grains, and lean proteins. These provide essential vitamins and minerals.
- **Healthy Fats:** Incorporate sources of omega-3 fatty acids like fish, nuts, and seeds. They support hormone production and overall fertility.
- **Antioxidants:** Foods rich in antioxidants, such as berries and nuts, help protect eggs and sperm from cellular damage.

Practical Tips:

- Eat a rainbow of fruits and vegetables daily.
- Choose whole grains like brown rice and quinoa.
- Include lean proteins such as chicken, fish, and legumes.
- Add healthy fats like avocados and olive oil to your diet.

Key Nutrients

Essential Nutrients for Fertility:

Folic Acid:

- **Role:** Vital for DNA synthesis and cell division.
- **Sources:** Leafy greens, beans, citrus fruits, and fortified grains.
- **Daily Requirement:** At least 400 micrograms for women trying to conceive.

Iron:

- **Role:** Crucial for ovulation and maintaining a healthy pregnancy.
- **Sources:** Lean meats, spinach, lentils, and fortified cereals.
- **Daily Requirement:** 18 milligrams for women of childbearing age.

Zinc:

- **Role:** Important for hormone regulation and ovulation.

- **Sources:** Meat, shellfish, dairy, and nuts.
- **Daily Requirement:** 8 milligrams for women, 11 milligrams for men.

Other Important Nutrients:

- **Vitamin D:** Supports hormone function and immune health. Get it from sunlight, fatty fish, and fortified foods.
- **Vitamin B6:** Helps regulate hormones. Found in bananas, potatoes, and chickpeas.
- **Selenium:** Protects against oxidative stress. Found in nuts, seafood, and meat.

Lifestyle Changes

Healthy Weight Management:

- **Why:** Both underweight and overweight can disrupt menstrual cycles and hormone levels, affecting fertility.
- **How:** Aim for a balanced diet and regular exercise to maintain a healthy BMI.

Hydration:

- **Why:** Staying hydrated is essential for overall health and helps maintain healthy cervical mucus, which is crucial for conception.
- **How:** Aim for at least 8 glasses of water a day.

Limit Alcohol and Caffeine:

- **Why:** High consumption of alcohol and caffeine can negatively impact fertility.
- **How:** Limit alcohol to occasional use and keep caffeine intake to less than 200 milligrams per day (about one 12-ounce cup of coffee).

Avoid Smoking:

- **Why:** Smoking is linked to reduced fertility in both men and women.
- **How:** Seek support to quit smoking, such as counseling or cessation programs.

Surrogacy

Types of Surrogacy

Traditional Surrogacy:

- **What is it?** The surrogate mother is artificially inseminated with the intended father's sperm and uses her own egg. She is genetically related to the baby.
- **Process:**
    1. **Artificial Insemination:** The surrogate undergoes intrauterine insemination (IUI) to achieve pregnancy.
    2. **Pregnancy and Birth:** The surrogate carries the baby to term and gives birth.

Gestational Surrogacy:

- **What is it?** The surrogate carries a pregnancy created through IVF, using the intended mother's or donor's egg and the intended father's or donor's sperm. The surrogate is not genetically related to the baby.
- **Process:**
    1. **IVF:** Embryos are created using the intended parents' or donors' gametes.
    2. **Embryo Transfer:** The embryos are transferred to the surrogate's uterus.
    3. **Pregnancy and Birth:** The surrogate carries the baby to term and gives birth.

Legal and Emotional Considerations

Legal Contracts:

- **Importance:** Legal contracts protect the rights of all parties involved, including the surrogate, intended parents, and the baby.
- **Components:** Agreements on parental rights, compensation, medical care, and responsibilities are outlined.
- **Advice:** Work with an experienced attorney specializing in reproductive law.

Emotional Support:

- **Why:** Surrogacy is an emotionally complex journey for both surrogates and intended parents.
- **How:** Engage in counseling before and during the surrogacy process to address emotional challenges and ensure a supportive environment.

Choosing a Surrogacy Agency:

- **Role:** Agencies help match surrogates with intended parents and provide support throughout the process.
- **Tips:** Research and choose reputable agencies with positive reviews and a track record of successful matches.