



ART Regulations: Impact on Cost and Conception Opportunities

For Prelims: [Assisted Reproductive Technology](#), [fundamental right](#), [In Vitro fertilization](#)

For Mains: Government Policies & Interventions, Issues Related to Women

Why in News?

Recently, industry insiders have raised concerns about the restrictions imposed by the provisions of the [Assisted Reproductive Technology \(ART\) Regulations Act, 2021](#) introduced by the Health Ministry.

- These concerns pertain to the **increased costs and limited conception opportunities** faced by couples seeking ART treatments, despite the regulations aiming to enhance medical care and security for donors and patients.

What is Assisted Reproductive Technology?

- ART refers to medical procedures used to help **individuals or couples conceive a child**.
- It involves various techniques, such as [in vitro fertilization \(IVF\)](#), **intracytoplasmic sperm injection (ICSI)**, Gamete Donation, Intrauterine Insemination, Pre-implantation Genetic Testing, Surrogacy, Altruistic Surrogacy.
- ART is often used by individuals or couples facing **fertility challenges**, including **infertility, genetic disorders, or reproductive system abnormalities**.
- ART procedures typically involve the manipulation of sperm, eggs, or embryos in a laboratory setting before transferring them to the woman's uterus.

What are the Main Features of the ART Regulations Act, 2021?

- **Registration:** Every ART clinic and bank must be registered under the **National Registry of Banks and Clinics of India**, maintaining a central database.
 - Registration is valid for **five years and can be renewed for another five years**.
 - Violations of the Act may result in cancellation or suspension of registration.
- **Conditions for Sperm & Egg Donation:** Registered ART banks can screen, collect, and store semen from **men aged 21-55 years**. Eggs can be stored from **women aged 23-35 years**.
- **Donor Limits:** Oocyte donors must be **ever-married women with at least one living child of their own (minimum three years of age)**.
 - An oocyte donor **can only donate once in her lifetime**, and a **maximum of seven oocytes can be retrieved**.
- **Gamete Supply:** An **ART bank cannot supply gametes from a single donor to more than one commissioning couple** (couple seeking services).
- **Parental Rights:** Children born through ART are deemed the **couple's biological child**, and the **donor has no parental rights**.
- **Consent:** Written informed consent is required from both the couple and the donor for ART

procedures.

- **Regulation of ART Processes:** The National and State Boards formed under the [Surrogacy Act 2021](#) will regulate ART services.
- **Insurance Coverage:** Parties seeking ART services must provide **insurance coverage in favor of the oocyte donor**, covering any loss, damage, or death of the donor.
- **Preventing Sex Selection:** Clinics are prohibited from offering to provide a **child of pre-determined sex, ensuring non-discriminatory practices.**
- **Offences:** Offences include abandonment or exploitation of children born through ART, sale or trade of embryos, and exploitation of the couple or donor.
 - Punishment includes **imprisonment of 8-12 years and a fine of Rs 10-20 lakhs.**
 - Clinics and banks are prohibited from advertising or offering sex-selective ART.
 - **Offences carry imprisonment of 5-10 years and a fine of Rs 10-25 lakhs.**

What are the Challenges and Concerns Regarding ART Regulations, 2021?

- **Increased Cost:** The regulations may lead to **higher treatment costs** due to additional requirements such as **insurance, testing, and registration fees.**
- **Reduced Availability:** Limitations on the **number of donors and cycles per donor** may result in a **shortage of suitable donors**, making it harder for couples to find matching gametes.
 - [Fertility rates are declining in India](#) and worldwide, making the limited availability of donors a significant challenge.
- **Challenges in Finding Suitable Donors:** The restrictions may pose challenges for doctors and couples in finding donors that **meet specific requirements** or preferences.
- **Discouragement for Potential Donors:** Concerns over legal and social repercussions, as well as **lack of incentives, may discourage potential donors** from participating in the ART process.

Way Forward

- Enhance **affordability through subsidies** and partnerships.
- Expand the **donor pool through awareness campaigns** and community support.
- **Streamline donor matching** with a centralized platform and advanced technology.
- Encourage research and innovation for cost-effective treatments.
- Develop a supportive legal framework protecting rights and addressing ethical concerns.

UPSC Civil Services Examination, Previous Year Question

Prelims

Q. In the context of recent advances in human reproductive technology, “Pronuclear Transfer” is used for (2020)

- (a) fertilization of egg in vitro by the donor sperm
- (b) genetic modification of sperm producing cells
- (c) development of stem cells into functional embryos
- (d) prevention of mitochondrial diseases in offspring

Ans: (d)

Exp:

- Pronuclear transfer involves the transfer of pronuclei from one zygote to another. This technique first requires fertilisation of healthy donated eggs (provided by the mitochondrial donor) with the intended male parent sperm. Simultaneously, the intending mother’s affected oocytes are fertilised with the intending father’s sperm.
- By using a technique, called ‘Maternal Spindle transfer’, the maternal DNA is put into the egg of a donor woman, which is then fertilized using the father’s sperm. The procedure was developed to help existing In-vitro-Fertilization (IVF) treatments in which mothers have mitochondrial diseases.
- Mutations in maternal DNA are a cause of mitochondrial disease, a heterogeneous group of

diseases that can lead to premature death, sometimes in infancy or childhood. Most mitochondrial diseases lack specific treatments, and women who carry the causative mutations are at high risk of transmitting the diseases to their offspring. Therefore, option (d) is the correct answer.

[Source: TH](#)

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