

Inherited Retinal Diseases (IRDs)

Why in News?

According to a recent study, there is a higher prevalence of Inherited Retinal Diseases (IRDs) situation in India.

- **IRDs** - It is a **genetic disorder**, a change or a variant, in one or more genes that contribute to proper retinal function.
- **Genetic mutations** - It stems from mutations in more than 300 genes responsible for the function of the retina, the light-sensitive tissue at the back of the eye.
- It varies significantly across different communities, and it is difficult to identify common mutations.
- **Impacts** - It **affects the gene's ability** to do its job properly.
- The mistake gene doesn't make a protein and cells in the retina degenerate and cause vision loss.
- **Vulnerables** - It affects individuals of all ages.

According to the World Health Organization (WHO), more than 2.2 billion people worldwide experience some form of vision impairment.

- **Causes** - Lose sight shortly after birth
 - Gradual deterioration over time
 - Progressive vision loss
 - Often resulting in blindness.
- **Treatment - Gene therapy** - It is for blindness caused by mutations in the *RPE65* genes and treat various inherited eye disorders.
- **RNA-based therapies** - To restore protein production in retinal cells without altering the underlying DNA.
- Treat retinal degenerative diseases caused by single-point mutations.

Studies have revealed significantly higher prevalence, with 1 in 372 individuals in rural South India, 1 in 930 in urban South India, and 1 in 750 in rural Central India affected by these conditions.

References

1. [The Hindu| IRDs Treatment & Precision Therapeutics](#)
2. [Prevent Blindness| Inherited Retinal Diseases \(IRDs\)](#)



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