

1. Shubhanshu Shukla: First Indian Aboard the International Space Station

Historic Moment for India

- Group Captain Shubhanshu Shukla of the Indian Air Force became the first Indian to enter the International Space Station (ISS) recently.
- He is part of Axiom Mission 4 (Ax-4), launched by Axiom Space in partnership with NASA.



Mission Highlights

- Launched from: Florida
- Capsule: Dragon spacecraft
- Position: Shukla served as the mission pilot

Significance for Gaganyaan Mission

- Shukla is one of four astronauts selected for India's Gaganyaan mission — ISRO's first human spaceflight, expected no earlier than 2026.
- ISRO spent over ₹500 crore to include Shukla and backup astronaut Prasanth Nair in the Ax-4 mission for training and space experience.

Training and Preparation

- NASA's Johnson Space Center: Advanced training for Ax-4.
- Russia: Prior Gaganyaan astronaut training for Shukla, Nair, Ajit Krishnan, and Angad Pratap.
- These experiences are vital due to Russia and the U.S.'s long-standing human spaceflight expertise.

Delays and Challenges

- The mission faced several delays:
 - Weather issues
 - Technical problems with the Falcon 9 rocket

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

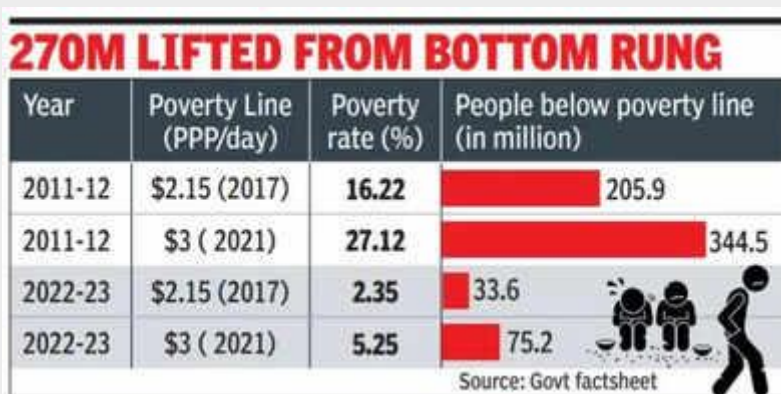
2. Understanding Poverty in India: It Depends on the Lens

Recent Poverty Claims

- In April 2025, the Indian government cited World Bank data, stating that 171 million people were lifted from extreme poverty over the past 10 years.
- The World Bank's June 2025 update claims only 5.75% of Indians now live in extreme poverty, down from 27% in 2011-12.

Key Findings from World Bank Data

1. Past poverty levels were lower than previously estimated (e.g., 47% in 1977-78 instead of 64%).
2. New Poverty Line: Now set at \$3/day (PPP) – in India, this equals Rs 62/day.
 - Under this, extreme poverty fell from 34.4 crore (2011-12) to 7.5 crore (2022-23).



Misconceptions About the \$3-a-Day Line

- It's not based on market exchange rates (₹85/\$), but on Purchasing Power Parity (PPP) – ₹20.6/\$ for India.
- So, \$3/day means Rs 62/day, not Rs 255/day.

What is a Poverty Line?

- It's a cut-off income to decide who is poor.
- Varies by time and place.
 - ₹1,000/month was enough in 1975 but is insufficient today.
 - ₹1 lakh/month is decent in Patna, but less so in New York.

Why Use Poverty Lines?

1. To target welfare policies to those in need.
2. To assess whether poverty has declined over time.

India's Shift to World Bank's Poverty Line

- India's last official poverty line: 2011-12 (Tendulkar method).
- The Rangarajan committee (2014) proposed updates, but they weren't adopted.
- Since then, India has relied on:
 - World Bank's poverty line (PPP-based).
 - NITI Aayog's Multidimensional Poverty Index (non-income-based).

How the World Bank Sets Its Poverty Line

- Based on PPP rates to reflect real purchasing power.
- Originally set at \$1/day (1985 prices); now updated to \$3/day.
- PPP rate for India in 2025: ₹20.6/\$ → Rs 62/day poverty line.

Historical Domestic Poverty Lines in India

Year	Urban Poverty Line	Rural Poverty Line
2009	₹29/day	₹22/day

Year	Urban Poverty Line	Rural Poverty Line
2011-12	₹36/day	₹30/day
2014 (Rangarajan)	₹47/day	₹33/day

Why Are India's Poverty Estimates Controversial?

- Lack of updated domestic poverty line and gaps in data.
- Depending on the method, India's poverty rate can vary from 2% to 82%.
 - Example: 5.75% (WB's extreme poverty) vs 66% (those getting free food).

Big Picture: So, How Poor Is India Really?

- Perspective 1: Celebrate reduction in extreme poverty (Rs 62/day).
- Perspective 2: Recognize that 83% of Indians live on Rs 171/day — far from economic comfort.

A Final Contrast

- The government waives income tax for those earning up to ₹12 lakh/year (₹3,288/day), acknowledging that this income is just adequate.
- Meanwhile, official poverty lines are set at Rs 62/day — creating a sharp disconnect between policy and economic reality.

Conclusion

India's poverty data depends on how you define "poverty", the benchmarks you choose, and the purpose of the measurement. With multiple methodologies and outdated domestic standards, poverty in India is both a statistical and political question — open to interpretation.

Relevance: GS Prelims & Mains Paper III; Economics

Source: Indian Express

3. How GLP-1 Drugs Like Semaglutide Are Transforming Obesity Treatment

India Joins the GLP-1 Revolution

Two powerful GLP-1 drugs — Semaglutide (Novo Nordisk) and Tirzepatide (Eli Lilly) — are now available in India. These medicines, already popular in the US, help people lose 15–20% of body weight, a result once possible only through bariatric surgery.

What Are GLP-1 Drugs?

GLP-1 drugs are part of a class called GLP-1 receptor agonists, used to treat:

- Type-2 diabetes
- Obesity

These mimic incretins, natural gut hormones that regulate blood sugar and appetite.

How Do They Work?

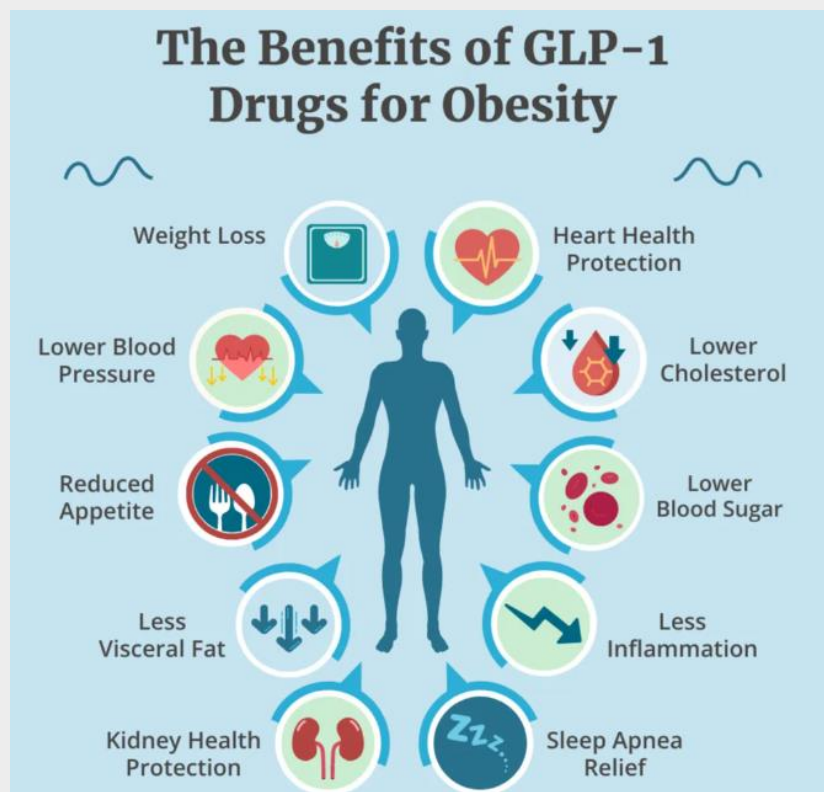
GLP-1 drugs help in four key ways:

1. Increase insulin secretion to absorb blood sugar.
2. Reduce glucagon (which raises blood sugar).
3. Slow stomach emptying to prevent sugar spikes.
4. Signal the brain to reduce appetite.

Tirzepatide also mimics GIP, another gut hormone, offering enhanced effects.

Discovery

- GLP-1 hormones were first discovered in 1986, but interest was delayed due to insulin's dominance.



Weight Loss and Beyond Clinical Benefits

- Semaglutide: Up to 15% body weight loss.
- Tirzepatide: Up to 20% weight loss.

Other Health Benefits

- Cardiovascular: Reduces heart attack/stroke risk by 20%.
- Mortality: Lowers all-cause death risk by 19%.
- Heart failure: Risk reduced by 69%.
- Liver health: Improves fatty liver and fibrosis.
- Sleep apnea: Tirzepatide approved for treatment.

Additional Effects

Cravings for sweets and alcohol drop significantly. Early studies suggest reduced Alzheimer's and dementia risk.

In Summary

GLP-1 drugs like semaglutide and tirzepatide:

- Are game-changers for obesity and diabetes treatment.
- Offer broad health benefits: heart, liver, brain, and appetite control.
- May soon become even more accessible with newer forms and dosing options.

Relevance: GS Prelims & Mains Paper III; Science & Technology

Source: Indian Express

'Join PrepMate IAS'

WhatsApp 'Name' and 'State' on 75979-00000 to receive daily current affairs in simple and concise language.