Tirzepatide

Prelims *– Current events of national and international importance.*

Mains *– Bio-Technology.*

Why in the News?

Eli Lilly, a multinational pharmaceutical company, officially launched its Tirzepatide (Mounjaro) drug in India.

- **Tirzepatide** – It belongs to a *new class of diabetes medicines* for the treatment of chronic obesity and for weight-loss.
- It is the ***1st significant weight-loss and diabetes drug*** to enter India.
- It is a type 2 diabetes management drug which is *injected weekly once*.
- **Approved by** – Central Drugs Standard Control Organisation (CDSCO), India's drug regulator.
- **Working mechanism** – It mimics 2 key hormones:
  - Glucagon-like peptide-1 (GLP-1)
  - Gastric inhibitory polypeptide (GIP)
- These hormones help regulate blood sugar, control appetite, and slow digestion.
- **Dual action on** – GLP-1 and GIP receptors sets it apart from Ozempic (Semaglutide), which only targets GLP-1.
- It is more effective than Ozempic (Semaglutide).

> ***Ozempic (Semaglutide)*** *is an anti-diabetic medication used for the treatment of type 2 diabetes and to lower the risk of a heart attack, stroke, or death in people who also have heart disease.*

Features	Tirzepatide (Mounjaro)	Ozempic (Semaglutide)
Receptors Targeted	GLP-1 + GIP	GLP-1 only
Weight Loss	**20–25%** of body weight.	Up to 15%
Diabetes Control	Superior blood sugar reduction.	Effective but less potent than Tirzepatide.

- **Common side effects** – Gastrointestinal issues such as nausea, vomiting, diarrhoea, and acid reflux.
- In some cases, severe diarrhea can lead to dehydration and acute kidney injury.
- **Suitable for**
  - Adults with Type 2 diabetes.
  - Obese or overweight individuals struggling with weight loss (up to 20 kg weight loss over 72 weeks).

- Patients with insulin resistance who haven’t responded well to other treatments.

Quick Facts
• India is seeing a rapid rise in ***both obesity and diabetes.*** • According to the International Diabetes Federation, Diabetes cases are projected to increase from 74.2 million in 2021 to 124 million by 2045. • A government survey, from 2019 to 2021, found that 24% of women and 23% of men (ages 15–49) are overweight or obese, a sharp increase from 2015–2016 levels.

Reference

The Indian Express| Mounjaro (Tirzepatide) in India

