GLP-1 Weight Loss Shot, Berobenatide

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Why in News?

Recently, Pfizer's investigational drug Berobenatide, a GLP-1 receptor agonist, has shown promising mid-stage trial results (VESPER-3).

- **Obesity –** A Chronic disease ***due to excess accumulation of body fat*** (BMI ≥ 30), driven by genetic, socioeconomic, and lifestyle factors.
- **Health risks –** Cardiovascular disease, Type 2 diabetes, Hypertension, Dyslipidemia, Liver disease, Sleep apnea, Cancers.

Berobenatide

- An experimental, ultra-long-acting glucagon-like peptide-1 receptor agonist (GLP-1 RA) peptide for chronic weight management and type 2 diabetes.
- **Developed by –** Pfizer.
- Potential first-in-class monthly treatment in an anti-obesity market currently dominated by weekly injections like Wegovy and Zepbound.

Mechanism

- **GLP-1 Action –** It mimics natural gut hormones that controls appetite, slows stomach emptying, and improves blood sugar.
- Molecular structure – Unique structure that binds to a blood protein called *albumin*, which stops the body from breaking it down quickly, keeps drug active longer.

  Albumin is the most abundant protein in human blood plasma, making up about 50% to 60% of total blood protein.

- **Injection Volume –** Works in a small, patient-friendly 0.5 mL dose.
- **Duration –** Sustains therapeutic effect for an entire month with one shot.

- **Side-Effect Profile –** Nausea and vomiting.

References

1. Indian Express | Berobenatide
2. Indian Express | Berobenatide

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