# Glimicot-MV 2.2

**Composition:**
Each Tablet consists:
Glimepiride2 mg
Metformin (Sustained Release) 500 mg
Voglibose 0.2 mg

**Indications**
Type 2 diabetes not controlled with dual therapy
Obese Type-2-Diabetic Patients

**Mechanism of Action**

**voglibose**: has general properties similar to acarbose and selectively inhibits α-glucosidase in the enteric canal, delaying the digestion and absorption of carbohydrate, thereby suppressing sharp increase in post-prandial plasma glucose.

**Glimepiride** stimulates the insulin release from functioning pancreatic β-cells and inhibits gluconeogenesis at hepatic cells. It also increases insulin sensitivity at peripheral target sites. Metformin decreases hepatic gluconeogenesis, decreases intestinal absorption of glucose and improves insulin sensitivity (increases peripheral glucose uptake and utilisation).

**Pharmacokinetic's**

bsorption: voglibose is poorly absorbed after oral administration. However, systematic adverse effects have been observed.

Metabolism: the metabolism of voglibose in liver is negligible.

Excretion: The renal excretion is negligible and plasma concentations after oral dose have been undetectable.

Metformin: Absorption: Slowly and incompletely absorbed from the GI tract. Absolute bioavailability: Approx 50-60% (fasting); reduced if taken w/ food. Time to peak plasma concentration: 2-3 hr (immediate-release); 4-8 hr (extended-release).

Distribution: It crosses the placenta and distributed in breast milk (small amounts). Volume of distribution: 654 ± 358 L. Plasma protein binding: Negligible.

Metabolism: Not metabolised.

Excretion: Via urine (90% as unchanged drug). Elimination half-life: Approx 2-6 hr.

Glimepiride: Duration: 24 hr.

Absorption: Completely absorbed from the GI tract. Time to peak plasma concentration: 2-3 hr.

Distribution: Volume of distribution: 8.8 L. Plasma protein binding: >99.5%.

Metabolism: Extensively metabolised in the liver via oxidation by CYP2C9 isoenzyme to 2 main metabolites.

Excretion: Via urine (approx 60%) and faeces (40%). Half-life: Approx 9 hr.

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**Side effects**

Voglibose: Flatulence; abdominal distension; diarrhoea; pain; skin reactions; hypoglycemia; increased LFT. Potentially Fatal: Hepatotoxicity. Diarrhoea, vomiting, metallic taste, rash, isolated transaminase elevations, cholestatic jaundice, allergic skin reactions, photosensitivity reactions, leukopaenia, agranulocytosis, thrombocytopaenia, haemolyticanaemia, aplastic anaemia, pancytopaenia, blurred vision. Potentially Fatal: Lactic acidosis.

**Precaution**

Voglibose: History of laparotomy or ileus. Roemheld's syndrome, stenosis, severe hepatic or renal impairment. Child <18 yr; elderly. Monitor LFT. Treat hypoglycaemic episodes with glucose (not with sucrose). Renal and hepatic impairment. Avoid alcohol consumption. Hypoglycaemic episodes.

**Dosage** Adult: Take as directed. Titrate according to response.

**Description**

Type 2 diabetes is one of the major problems confronting the health care system. Currently 25 million Indians have diabetes and the projections indicate Indians would be the largest group by the year 2025 AD. It is the leading cause of blindness and end-stage renal disease, and it is a major risk factor for cardiovascular disease. Increased glycatedhaemoglobin (HbA1c) is associated with an increased risk of myocardial infarction. Glycatedhaemoglobin levels reflect fasting and postprandial glycaemia. Fasting hyperglycaemia is represented as an elevated hepatic glucose output and/or defect in early insulin secretion.