

Medication Names

Metformin
Glucophage

Therapeutic Use

Type 2 diabetes mellitus

Adverse Drug Reactions

Lactic acidosis (rare, but potentially fatal)
Nausea, diarrhea, vomiting
Unpleasant metallic taste
Vitamin deficiencies (vitamin B12, folic acid)

Interventions

Monitor for indications of lactic acidosis.
For signs of lactic acidosis, stop drug therapy immediately.
Expect that severe lactic acidosis will require hemodialysis.
Monitor for persistent nausea, vomiting, or diarrhea
Monitor fluid intake and output.
Monitor for indications of vitamin B12 or folic acid deficiency.
Recommend the appropriate supplements.
Monitor renal function upon initial therapy and yearly afterward

Precautions

Diarrhea, Dehydration
Anemia
Pituitary insufficiency
Gastroparesis
Gastrointestinal obstruction.
Hyperthyroidism
Older adults

Drug Administration

Give orally twice a day with the morning and evening meals (immediate-release) or once a day with the evening meal (extended-release)
Make sure clients swallow the extended-release form whole and do not crush or chew it.

Patient Education

Avoid drinking alcohol.
Report weakness, fatigue, lethargy, or hyperventilation.
If these symptoms develop, stop taking the drug and seek medical care immediately
Expect these effects to diminish as drug therapy continues
Lie down when feeling nauseated
Maintain adequate carbohydrate and fluid intake
Report weakness, fatigue, pallor, or reddened tongue.

Contraindications

Diabetic ketoacidosis
Cardiopulmonary, hepatic, or renal insufficiency
Alcoholism
Heart failure
Severe infection
Shock
Acute myocardial infarction
Hypoxemia
Lactic acidosis

Interactions

Alcohol and cimetidine (Tagamet) increase the risk of lactic acidosis.
Any contrast medium containing iodine increases the risk of acute renal failure, thus worsening lactic acidosis
Nifedipine (Procardia), furosemide (Lasix), morphine, antifungals, and many other drugs increase hypoglycemic effects.

