

Hypoglycemia Panel (Sulfonylureas)

Indications for Ordering

Preferred test for evaluating if etiology of hypoglycemia is sulfonylurea ingestion

Test Description

Qualitative liquid chromatography/tandem mass spectrometry detects

- Glyburide
- Glimepiride
- Glipizide
- Repaglinide
- Nateglinide
- Acetohexamide
- Chlorpropamide
- Tolazamide
- Tolbutamide

Tests to Consider

Primary Test

[Hypoglycemia Panel, Sulfonylureas Qualitative, Serum or Plasma 2010292](#)

Related Tests

Evaluate if etiology of hypoglycemia is from exposure to sulfonylurea hypoglycemic drugs

- Serum or plasma is the preferred specimen for correlating drug use with hypoglycemia

[Metformin Quantitative, Serum or Plasma 0092390](#)

[Sulfonylurea Hypoglycemia Panel, Quantitative, Urine 0091100](#)

Disease Overview

Clinical issues

- Sulfonylureas are commonly prescribed oral hypoglycemic agents used to treat type II diabetes mellitus
- Hypoglycemia may be rapidly occurring with agents such as glipizide if taken in large quantities
 - Symptoms may resemble other type of drug overdose, ethanol intoxication
- Small doses (eg, 2-5 mg) in children may cause significant and prolonged hypoglycemia
- Surreptitious use of sulfonylureas may also cause hypoglycemia
- Urine or plasma testing can identify sulfonylurea ingestion

Test Interpretation

Analytical sensitivity

Limit of detection

- Glyburide – 5 ng/mL
- Glimepiride – 5 ng/mL
- Glipizide – 5 ng/mL
- Repaglinide – 5 ng/mL
- Nateglinide – 5 ng/mL
- Acetohexamide – 100 ng/mL
- Chlorpropamide – 100 ng/mL
- Tolazamide – 100 ng/mL
- Tolbutamide – 100 ng/mL

Results

- Positive – detected above cutoff concentration
 - Indicates recent ingestion
- Negative – not detected

Limitations

Cutoff concentrations vary by drug