

Type II Diabetes Information Sheets for Healthcare Providers

How does the Poison Center get involved in events involving diabetes medications?

Type II Diabetes (T2D) is a common disease – about 675,000 individuals (13% of the residents) in Indiana have it. It can often be managed with careful attention to diet, exercise, and the use of oral medications. The most common medications used for initial treatment of T2D are metformin and a class of drugs called sulfonylureas. Exposure to the medications used to treat T2D account for about 8% (356 cases) of the exposure cases reported annually to Indiana Poison Center. Management of these exposures can become complicated.

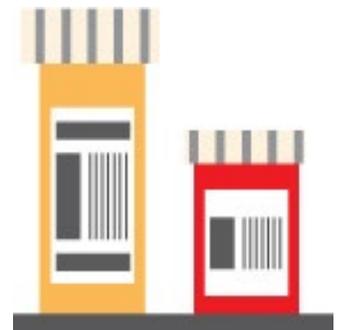
How do sulfonylureas work?

Sulfonylureas treat hyperglycemia by stimulating the production of more insulin from pancreatic beta-islet cells. For people with high blood sugar, like those with diabetes, use of a sulfonylurea causes their blood glucose to drop to the normal range. If the person does not have hyperglycemia, a sulfonylurea may cause a symptomatic, potentially life-threatening hypoglycemia. These symptoms may not become obvious for up to 12 to 24 hours after ingestion, and the hypoglycemia may persist for up to 72 hours afterwards.

How do exposures to sulfonylureas happen?

A young child may ingest a medication without knowing that it even is a medication. This may be part of a child's normal development; as toddlers explore their environment and learn about the world, they touch and taste everything. Older, preschool aged children may unintentionally ingest medications when they are playfully imitating adult activities – they may copy how mom or grandma drinks coffee and takes their medications every morning, or they may substitute medication for treats while playing tea party or other games.

School-aged and teenaged children may be unintentionally be exposed to T2D medications if they are given, or accidentally take, those medications instead of their usual medication. These therapeutic error exposures are also common in adults. If an adult is prescribed a medication, they may unintentionally take the medication twice. If they are not prescribed the medication, they may mistakenly take another adult's medication instead of their own, or, if one family member is setting out medications for another family member, it is not unusual for the medications to become confused.



Adults who are prescribed T2D medications may sometimes take an extra dose, or more, either in an attempt to catch up on unintentionally missed doses, or because they feel that a larger dosage of their medication is necessary to treat their illness. They do this on purpose, but without intent to harm themselves. Finally, some teens or adults may deliberately ingest a quantity of various medications, belonging to them or to other people, in an attempt to harm themselves or commit suicide.

What should you do if an exposure occurs?



Assess the patient. If they are unconscious, not breathing, or having seizures, begin appropriate resuscitation and call 911. If they are asymptomatic, call Indiana Poison Center at 1-800-222-1222 for specific directions.



The Specialist who answers your call will need to ask lots of questions to best assess the exposure and determine the necessary treatment. Usually having the parent/caregiver or patient themselves talk directly to IPC is best.



The PCC will gather the necessary information and then make a recommendation for treatment. We always focus upon finding the safest option for the patient and family, which may or may not include seeking medical care in a hospital.



When there is a question of whether a sulfonyleurea drug has been ingested, most often the patient will have to go to the hospital for observation. We will recommend that they be admitted for at least 24 hours of observation and labs.

Should we make the patient vomit?

No. Inducing vomiting as a treatment for possible ingestion of a poison or toxic substance has been demonstrated to be ineffective therapeutically and potentially dangerous. Inducing emesis has been found to cause such things as pulmonary aspiration and oropharyngeal trauma.

Do we need to send them in by ambulance?

If the patient is asymptomatic, reliable transportation is available, and the parent or caregiver can **safely** drive them to the ED within 30-45 minutes, they may go in via private vehicle. If there is no reliable transportation on hand, if the driver is unable to drive safely, or if it would take more than 45 minutes to safely drive to the ED, then it would be best to call 911.

What treatment can we expect the hospital to provide?

Actual treatment will depend upon the symptoms the patient develops. Most of the time, the patient will need to be admitted for a minimum of 24 hours. Their vital signs and neurologic status will be closely monitored. They will need IV access and will need to have serial labs checked, including blood glucose levels every hour for at least 12-24 hours. If they develop hypoglycemia, treatment may include administration of dextrose, glucagon, or octreotide.