

Diseases And Conditions



Question: What are the complications of diabetes insipidus?

Answer: The main complication of diabetes insipidus is dehydration if fluid loss is greater than liquid intake. Signs of dehydration include: thirst, dry skin, fatigue, sluggishness, dizziness, confusion, and nausea. Severe dehydration can lead to seizures, permanent brain damage, and even death. **Seek Immediate Care** Usually, people can prevent dehydration by increasing the amount of liquids they drink. However, some people may not realize they need to drink more liquids, which can lead to dehydration. People should seek immediate care if they experience symptoms of more severe dehydration, such as confusion dizziness and sluggishness. **How is diabetes insipidus diagnosed?** A health care provider can diagnose a person with diabetes insipidus based on the following:

- medical and family history
- physical exam
- urinalysis
- blood tests
- fluid deprivation test
- magnetic resonance imaging (MRI)

Medical and Family History Taking a medical and family history can help a health care provider diagnose diabetes insipidus. A health care provider will ask the patient to review his or her symptoms and ask whether the patient's family has

a history of diabetes insipidus or its symptoms. **Physical Exam** A physical exam can help diagnose diabetes insipidus. During a physical exam, a health care provider usually examines the patient's skin and appearance, checking for signs of dehydration. **Urinalysis** Urinalysis tests a urine sample. A patient collects the urine sample in a special container at home, in a health care provider's office, or at a commercial facility. A health care provider tests the sample in the same location or sends it to a lab for analysis. The test can show whether the urine is diluted or concentrated. The test can also show the presence of glucose, which can distinguish between diabetes insipidus and diabetes mellitus. The health care provider may also have the patient collect urine in a special container over a 24-hour period to measure the total amount of urine produced by the kidneys. **Blood Tests** A blood test involves drawing a patient's blood at a health care provider's office or a commercial facility and sending the sample to a lab for analysis. The blood test measures sodium levels, which can help diagnose diabetes insipidus and in some cases, determine the type. **Fluid Deprivation Test** A fluid deprivation test measures changes in a patient's body weight and urine concentration after restricting liquid intake. A health care provider can perform two types of fluid deprivation tests:

- **A short form of the deprivation test.** A health care provider instructs the patient to stop drinking all liquids for a specific period of time, usually during dinner. The next morning, the patient will collect a urine sample at home. The patient then returns the urine sample to his or her health care provider or takes it to a lab where a technician measures the concentration of the urine sample.
- **A formal fluid deprivation test.** A health care provider performs this test in a hospital to continuously monitor the patient for signs of dehydration. Patients do not need anesthesia. A health care provider weighs the patient and analyzes a urine sample. The health care provider repeats the tests and measures the patient's blood pressure every 1 to 2 hours until one of the following happens:
 - The patient's blood pressure drops too low or the patient has a rapid heartbeat when standing.
 - The patient loses 5 percent or more of his or her initial body weight.
 - Urine concentration increases only slightly in two to three consecutive measurements.

At the end of the test, a health care provider will compare the patient's blood sodium, vasopressin levels, and urine concentration to determine whether the patient has diabetes insipidus. Sometimes, the health care provider may administer medications during the test to see if they increase a patient's urine concentration. In other cases, the health care provider may give the patient a

concentrated sodium solution intravenously at the end of the test to increase the patient's blood sodium level and determine if he or she has diabetes insipidus.

Magnetic Resonance Imaging Magnetic resonance imaging (MRI) is a test that takes pictures of the body's internal organs and soft tissues without using x-rays. A specially trained technician performs the procedure in an outpatient center or a hospital, and a radiologist—a doctor who specializes in medical imaging—interprets the images. A patient does not need anesthesia, although people with a fear of confined spaces may receive light sedation. An MRI may include an injection of a special dye, called contrast medium. With most MRI machines, the person lies on a table that slides into a tunnel-shaped device that may be open ended or closed at one end. Some MRI machines allow the patient to lie in a more open space. MRIs cannot diagnose diabetes insipidus. Instead, an MRI can show if the patient has problems with his or her hypothalamus or pituitary gland or help the health care provider determine if diabetes insipidus is the possible cause of the patient's symptoms. **How is diabetes insipidus treated?** The primary treatment for diabetes insipidus involves drinking enough liquid to prevent dehydration. A health care provider may refer a person with diabetes insipidus to a nephrologist—a doctor who specializes in treating kidney problems—or to an endocrinologist—a doctor who specializes in treating disorders of the hormone-producing glands. Treatment for frequent urination or constant thirst depends on the patient's type of diabetes insipidus:

- **Central diabetes insipidus.** A synthetic, or man-made, hormone called desmopressin treats central diabetes insipidus. The medication comes as an injection, a nasal spray, or a pill. The medication works by replacing the vasopressin that a patient's body normally produces. This treatment helps a patient manage symptoms of central diabetes insipidus; however, it does not cure the disease.
- **Nephrogenic diabetes insipidus.** In some cases, nephrogenic diabetes insipidus goes away after treatment of the cause. For example, switching medications or taking steps to balance the amount of calcium or potassium in the patient's body may resolve the problem. Medications for nephrogenic diabetes insipidus include diuretics, either alone or combined with aspirin or ibuprofen. Health care providers commonly prescribe diuretics to help patients' kidneys remove fluid from the body. Paradoxically, in people with nephrogenic diabetes insipidus, a class of diuretics called thiazides reduces urine production and helps patients' kidneys concentrate urine. Aspirin or ibuprofen also helps reduce urine volume.
- **Dipsogenic diabetes insipidus.** Researchers have not yet found an elective treatment for dipsogenic diabetes insipidus. People can try sucking on ice chips or sour candies to moisten their mouths and increase saliva flow, which may reduce the desire to drink. For a person who wakes

multiple times at night to urinate because of dipsogenic diabetes insipidus, taking a small dose of desmopressin at bedtime may help. Initially, the health care provider will monitor the patient's blood sodium levels to prevent hyponatremia, or low sodium levels in the blood.

- **Gestational diabetes insipidus.** A health care provider can prescribe desmopressin for women with gestational diabetes insipidus. An expecting mother's placenta does not destroy desmopressin as it does vasopressin. Most women will not need treatment after delivery.

Most people with diabetes insipidus can prevent serious problems and live a normal life if they follow the health care provider's recommendations and keep their symptoms under control. Source: <https://www.niddk.nih.gov/health-information/kidney-disease/diabetes-insipidus> The Nephrotic Syndrome

- The nephrotic syndrome is a condition marked by very high levels of protein in the urine; low levels of protein in the blood; swelling, especially around the eyes, feet, and hands; and high cholesterol.
- The nephrotic syndrome is a set of symptoms, not a disease in itself. It can occur with many diseases, so prevention relies on controlling the diseases that cause it.
- Treatment of the nephrotic syndrome focuses on identifying and treating the underlying cause, if possible, and reducing high cholesterol, blood pressure, and protein in the urine through diet, medication, or both.
- The nephrotic syndrome may go away once the underlying cause, if known, is treated. However, often a kidney disease is the underlying cause and cannot be cured. In these cases, the kidneys may gradually lose their ability to filter wastes and excess water from the blood. If kidney failure occurs, the patient will need to be on dialysis or have a kidney transplant.

Source: <https://www.niddk.nih.gov/health-information/kidney-disease/nephrotic-syndrome-adults>