

Diabetes Insipidus

Causes, diagnosis, and treatments

This handout explains diabetes insipidus, how it is diagnosed, and treatment options.

What is diabetes insipidus?

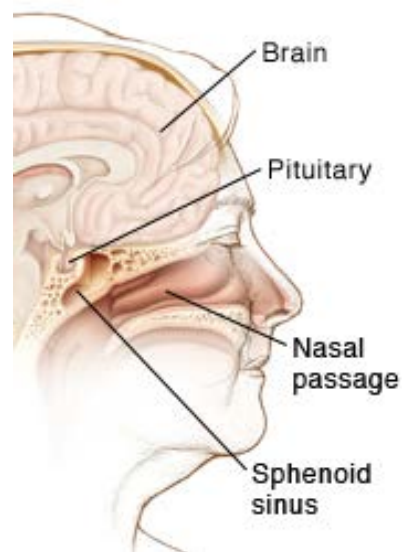
Diabetes insipidus (DI) occurs when your body does not make enough *anti-diuretic hormone* (ADH) or your kidneys do not respond to it.

Your body makes ADH in the *hypothalamus*, the part of the brain that controls hunger, thirst, and body temperature. The ADH is stored in your pituitary gland, a small gland at the base of your brain. When your body starts to become dehydrated, the pituitary gland releases the ADH into your bloodstream. The ADH tells the kidneys to release water back into your bloodstream, instead of excreting as much water into your urine.

What causes DI?

DI may be caused by:

- Absence of the pituitary gland since birth (*congenital*)
- *Lesions* (injuries) that affect the pituitary gland or the *pituitary stalk* (the link between the hypothalamus and the pituitary gland)
- Diseases that damage the pituitary stalk or pituitary gland, such as:
 - *Craniopharyngioma*
 - *Lymphocytic hypophysitis*
 - *Sarcoidosis*
 - *Germinoma*
 - *Rathke's cleft cyst*
 - *Tuberculosis*
 - *Granulomatous diseases*
 - Tumors
 - *Pituitary ganliocytoma*
- Injury to the pituitary gland or pituitary stalk after surgery to that area.



The pituitary gland sits at the base of the brain, behind the nose and sinuses.

What are the symptoms of DI?

The symptoms of DI include:

- Still being very thirsty even though you drink plenty of fluids (*polydipsia*)
- Craving ice water
- Excreting large amounts of diluted urine (*polyuria*)

Most times, a person with DI drinks a lot of water. If they do not drink enough water to keep up with the water loss in the urine, they can become very dehydrated. Symptoms of severe dehydration include:

- Dry mucus membranes (lips, mouth)
- Fast heart rate
- Weakness
- Confusion

How is DI diagnosed?

Your doctor will start by asking you about your symptoms and health history. You may also have lab tests. These may include:

- A urine test to look for dilute urine
- A blood test to check your sodium level

How is DI treated?

Sometimes, DI is **very** mild and may be short-term. This can happen if you recently had pituitary surgery. If this is true for you, your doctor will advise that you drink a certain amount of water during the day.

Medicine to Treat DI

If your DI is more severe, your *endocrinologist* (a doctor who treats diseases of the glands) may prescribe medicine such as *desmopressin* (DDAVP). This medicine controls your fluid balance.

Some patients can take DDAVP only at night. This allows them to sleep through the night without having to get up to empty their bladder.

It is important not to use too much DDAVP. It can cause too much dilution of the urine, leading to *hyponatremia* (low sodium in the blood). This can cause drowsiness, seizures, and even death.

An endocrinologist will manage your dose of DDAVP and adjust it as needed.

Question?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

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