Central Diabetes Insipidus
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What is central diabetes insipidus?
Central diabetes insipidus (diabetes insipidus or DI) is a rare disorder of water balance. Normally, the amount of fluid you drink is balanced with the amount of fluid you pass as urine (pee). When you have DI, you produce a lot of dilute (weak) urine, which makes you feel dry and thirsty.

Dehydration is the main danger of this disorder. If you have DI, you need to drink a lot to replace the fluid you lose.

Diabetes insipidus is not the same as diabetes mellitus. In diabetes mellitus (“sugar diabetes”) there is too much sugar in the blood. DI has nothing to do with blood sugar.

What are your questions? Please ask. We are here to help you.

In Nova Scotia you can call 811 to talk with a registered nurse about your health care questions 24/7.
Vasopressin (ADH)

- Your water balance is controlled by a hormone called vasopressin (also known as ADH).
- This hormone is stored and secreted (released) by the pituitary gland (a small pea-sized gland at the base of your brain, just above the back of your nose).

Vasopressin keeps your water balance by sensing the concentration of your body fluids. It prevents dehydration by reabsorbing water from the kidneys back into the bloodstream.

- Damage to the pituitary gland can cause a decrease in vasopressin. Not having enough vasopressin prevents the reabsorption of water from the kidneys. This causes you to pass a lot of dilute urine.
What causes DI?

- Since vasopressin is stored and secreted by the pituitary gland, any condition causing pituitary damage can cause DI. These include:
  - pituitary tumours
  - neurosurgical operations (operations on the nervous system)
  - radiation to the brain
  - head injury
  - infections
  - bleeding
- It is possible to have temporary DI after having pituitary surgery. This usually goes away over time, but in some cases it may be permanent.

What are the symptoms of DI?

- Excessive (too much) urination of clear dilute urine (polyuria).
- Excessive thirst (polydipsia).
- Extreme tiredness – This is usually due to interrupted sleep because of the need to get up often during the night to pass urine.
How is DI diagnosed?

You may have tests to measure the concentration of your urine and blood. These include:

- Urinalysis
- Urine test for specific gravity (to check how dilute your urine is)
- Urine and serum osmolality (to check the concentration of your urine)
- **Water Deprivation Test** (this special test may be done in some cases to confirm DI)
  - You will not be able to drink any fluids for several hours (usually for the morning). During this time, your blood and urine will be collected and the concentrations of both will be tested.
  - You will be weighed and your urine volumes will be measured.
  - If you continue to have a large urine output during the test, you may be given a dose of vasopressin to test your body’s response to the hormone.
How is DI treated?

• Before leaving the hospital, your health care team will do blood and urine tests.

• If the tests confirm DI, you will be started on a synthetic (man-made) form of vasopressin (desmopressin, also called DDAVP).

• DDAVP comes in the form of pills, a nasal spray, or an injection. Your doctor will talk with you about the best type for you. You will be carefully monitored to make sure that you take the right dose.

The goals of treatment with DDAVP are:

› To achieve a normal concentration of body fluids. This can be measured by doing blood tests.

› To avoid a lot of urination during the day and at night.

• An important part of your treatment is to balance your fluid intake with your urine output. If this disorder goes untreated, you could get seriously dehydrated.
DI provincial special funding program

- Nova Scotia residents who have DI and do not have medication insurance coverage may be eligible for help paying for their DDAVP through Nova Scotia Pharmacare.

- To use this service, your doctor must provide Nova Scotia Pharmacare with written notice and the medication must be dispensed by the Metropolitan Drug Dispensary in the IWK hospital.

If you cannot balance your urine output with your fluid intake, call your doctor or nurse. A sign of this imbalance is that you are urinating large amounts of clear odourless (no smell) fluid and that you are very thirsty.

For more info on DI, please contact:

Genetic and Rare Diseases Information Center (GARD)
PO Box 8126
Gaithersburg, MD USA 20898-8126
Toll-free: 1-888-205-2311
Phone: 301-251-4925
http://rarediseases.info.nih.gov/gard
Looking for more health information? Find this pamphlet and all our patient resources here: http://library.nshealth.ca/PatientGuides

Contact your local public library for books, videos, magazines, and other resources.

For more information, go to http://library.novascotia.ca

Connect with a registered nurse in Nova Scotia any time: call 811 or visit https://811.novascotia.ca

Learn about other programs and services in your community: call 211 or visit http://ns.211.ca

Nova Scotia Health Authority promotes a smoke-free, vape-free, and scent-free environment.

Please do not use perfumed products. Thank you!

Nova Scotia Health Authority
www.nshealth.ca

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The information in this pamphlet is to be updated every 3 years or as needed.