

Water Deprivation Test

What is a Water Deprivation Test?

It's a test which is used to check if dehydration occurs when fluids are withheld and if you feel thirsty and/ or passing a lot of urine.

Why would I need this test?

You may have a condition called Diabetes insipidus (DI). People with this condition are unable to 'conserve' water resulting in too much fluid leaving the body leading to excessive urination (Polyuria) and feeling thirsty resulting in excessive consumption of fluid (Polydipsia). This can be due to a lack of hormone (antidiuretic (ADH) or arginine vasopressin) production due to disease of hypothalamus or pituitary gland (Central DI). It may also be due to disease of the kidney causing lack of response to the fluid conserving action of ADH (Nephrogenic DI). Sometimes, it is also due to behavioural changes, (fluid seeking behaviour) leading excessive consumption of fluid (Psychogenic DI)

What are the symptoms that have led to me having this procedure?

The main symptoms that you may have are:

- Excessive thirst (no matter how much you drink)
- the need to pass urine very frequently, even during the night. You will pass large volumes of urine; you may pass as much as 4 - 10 litres of urine a day.

You may will have symptoms of dehydration:

- feeling shivery and nauseous with headaches.

What are the alternatives?

There are no recommended alternatives to this test.

What are the expected benefits of having the test?

This test will help your doctor find out if you have diabetes insipidus (DI) and aid to identify the specific type of DI. This will then allow your healthcare team to plan your treatment.

What are the potential risks and side effects?

There is a risk of dehydration with this test which is why you will be carefully monitored by your endocrine specialist nurse throughout the test. If you do become significantly dehydrated or if you feel unwell the test will be stopped.

If you have had the desmopressin injection (most people will not), it is important that you do not drink too much that evening and night. The injection usually causes concentration of the urine; if you drink excessively and are concentrating your urine, you may develop an imbalance in salts in your body. This may lead to you feeling disorientated and ill.

A cannula (tiny plastic tube) will be inserted into a vein in your arm or hand using a needle. The cannulation process is similar to that of a blood test.

Associated risks with cannulation or a blood test may include:

- multiple punctures to locate veins
- bleeding from puncture site
- bruising
- haematoma (blood build up under the skin)
- fainting or feeling lightheaded
- infection (a slight risk any time the skin is broken)
- phlebitis (inflammation of the vein)

Keeping pressure on the puncture site for a few minutes after the needle is removed will help to reduce bruising

Preparation for your test

One week before your test: If possible and only if it is safe to do so, your doctor may ask you to stop any water tablets, carbamazepine, phenytoin or lithium that you are taking. If you are taking desmopressin tablets or spray, please discuss this with your endocrinologist. All of this will have been discussed with your doctor when this test was suggested. If you have any questions, please contact the endocrine team on the number below.

One day before your test: Avoid drinks containing caffeine including tea and coffee and even decaffeinated drinks; try to drink only plain water or fruit juices to quench your thirst. Please do not smoke or drink alcohol 24 hours prior to your test. Drink according to your thirst but try to avoid drinking large volumes if possible.

On the morning of the test: You can eat a light breakfast (toast or cereal remembering no tea or coffee) but please time this to be at least two hours before your appointment. Continue to take any medication you are prescribed unless you have been told not to do so. Drink according to your thirst but try to avoid drinking large volumes if possible.

As you will be in hospital all day, it is advisable that you bring something to read with you.

What happens during the test?

A small, thin tube (a cannula) will be inserted into a vein in your hand or arm after you arrive. This means that your nurse can take blood from you throughout the duration of the test without having to use a needle every time.

Once the cannula is in place, a blood sample will be taken. You will be asked to provide a urine sample and you will be weighed. It is important that you do not drink anything during the test even if you feel very thirsty as this will make it very hard to interpret your test results. Throughout your test, you will have a series of blood and urine samples taken. You will also be weighed hourly to check that you are not losing too much water. It is important that all the urine you pass during the test is collected so that we can accurately measure the amount that you produce.

The test will be stopped if the results from your blood tests suggest you are becoming very dehydrated or if your body weight drops by more than three percent.

If your test results indicate that you have not been able to normally concentrate your urine by the end of the eight hours, then your doctor may decide that you will have an injection of desmopressin (ADH). This will help your endocrine team determine whether there is a problem with the pituitary gland or the kidneys. If this happens, the test may continue for up to an additional four hours.

There will be an opportunity to discuss any aspects of your water deprivation test that you are not sure about on the morning before the test starts. Alternatively, you may contact your endocrine specialist nurse beforehand on the number provided below.

Will I have an anaesthetic?

No

How will I feel afterwards?

You may feel very tired after the test as a result of fasting.

How long will I be in hospital?

You will be in the hospital for maximum of 12 hours.

What should I do when I go home?

In most cases, patients resume their normal activities. It is important that you do not drink too much 24hrs after the test.

How soon will I be able to resume normal activities?

In most cases, this test should not affect your normal activities.

Will I have to come back to hospital?

Depending on the test results, further tests may be required.

When can I return to work?

There are no work restrictions involved for this test as in most cases, patients resume their normal activities after the test

Consent

Although you consent for this test, you may at any time withdraw such consent. Please discuss this with your endocrine team.

Sources of information

For queries concerning this leaflet or your procedure please contact:

Endocrine Team at ESHT

Telephone: 0300 131 5910 - EDGH and CQ

Opening Hours: 8am – 4pm (Monday – Friday except Bank Holidays)

Important information

This patient information is for guidance purposes only and is not provided to replace professional clinical advice from a qualified practitioner

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 131 4731 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 0300 131 4434 Email: esh-tr.AccessibleInformation@nhs.net

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The following clinicians have been consulted and agreed this patient information:

Consultant Endocrinologists (ESHT):

Dr David Till, Dr Umesh Dashora, Dr P. Sathis Kumar, Dr Ashref Bdiri, Dr. Koshy Jacob, Dr Shakeel Ahmad, Dr Sadekh Elrokh

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The Endocrinology Department has agreed this patient information leaflet.

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