

# Water deprivation test



## **Who is this leaflet for?**

This leaflet is for patients who have received an appointment to have a water deprivation test at the Medical Day Centre (MDU) in the Royal Cornwall Hospital.

## **What is a water deprivation test?**

This is a test to diagnose Diabetes Insipidus (DI), a rare condition where the body cannot retain enough water. (This is not to be confused with the more common Diabetes Mellitus, which is a condition resulting in raised blood sugar levels.)

The test involves depriving you of fluid for 6-8 hours so we can assess your urine output, and test your blood and urine samples.

## **Why do I need it?**

Your consultant endocrinologist has requested this test to assess how well your pituitary gland and kidneys are working. This will help your consultant to diagnose whether you have DI, and if so, which type (cranial or nephrogenic). Your consultant can then plan any treatment you may need.

## **What is cranial DI?**

This is a disease that makes you pass too much urine. It is caused by the under production of a hormone called Anti Diuretic Hormone (ADH). ADH is produced by your hypothalamus (the part of your brain that controls your pituitary gland) and is stored and released by your pituitary gland.

## **What is the pituitary gland?**

It is a small pea size gland at the base of your brain, a few inches behind the bridge of your nose. It plays a major role in controlling your body's hormone production.

## **What is nephrogenic DI?**

In this condition the hypothalamus and pituitary gland produce enough ADH, but your kidneys do not respond. This is a kidney disease, which means you would also need to see a renal (kidney) specialist. Nephrogenic DI is usually treated with special oral medicines.

## **How do I prepare for the test?**

If you are already taking DDAVP medication you will need to stop this at least 24 hrs before starting the test. If you are on steroid replacement, you can take these as normal. Please bring any medications you are taking with you on the day of your test.

## **How long will it take?**

The test itself may take up to 13 hrs, so please prepare yourself for this. You may wish to bring something with you to help pass the time, such as a book, magazine etc.

## **What will the test involve?**

On the morning of your test, you may have a light breakfast and a drink around 6.30am prior to your arrival. You should then not consume any food or drinks until the test has been fully completed.

On your arrival at MDU a nurse will show you to your bed and complete the necessary paperwork. The nurse will also explain the procedure to you and ask for your verbal consent.

YOU will be asked not to leave your bedside and will not be allowed any food or drinks for the duration of the test. You will be unable to smoke throughout the test.

1. We will insert a cannula (small plastic tube) into your arm. This will allow the nurse to obtain blood samples without causing too much discomfort.
2. We will take regular blood samples from your cannula.
3. You will be asked to collect your urine in a sample pot. We will then measure it and send regular samples for testing. Your nurse will tell you when each sample is needed.
4. We will also record your weight at set intervals.
5. We will monitor you closely throughout your test. If for any reason the test needs to be stopped, one of the endocrine doctors will authorise this.
6. After 8 hours we will review your results and decide whether to give you an injection of DDAVP (a medicine similar to natural ADH). If this is required, it will be injected and you will be allowed to drink fluids. We will continue to take urine and blood collections for a further four hours.

The aim is to assess your body's response to a lack of fluids and then its response after an injection of DDAVP.

## **What happens afterwards?**

When the test is complete we will remove your cannula and offer you some refreshments before you go home.

You may like to arrange for a friend, relative or hospital car service to drop you off before the test and collect you afterwards. This will avoid long stay car park charges and will assist you if you do not feel well enough to drive home. Please contact us if you have any concerns about this.

## **Are there any risks or complications?**

There is a very small risk that you could become seriously dehydrated. This is unlikely as you will be monitored closely throughout your test. The nurses will stop the test if they are at all concerned about you.

## **Are there any alternatives?**

No. There is no alternative to this test.

## **What if I don't have the test?**

If you feel that you do not want this test, you can decide against it. However, this may prevent accurate diagnosis of your condition and affect any future treatment. If you do decide against the test, please inform the MDU so that we can give your appointment to someone else.

## **When will I get my results?**

Your consultant will receive and review your results, and either write to your GP or discuss them with you at your next clinic appointment.

## General information

- Please note that Royal Cornwall Hospitals Trust has a no smoking policy. This applies across the site to all the buildings and grounds.
- Car parking charges also apply.

## Any questions?

We hope to make your stay as pleasant as possible. If you have any queries or concerns, please contact the Medical Day Unit on: 01872 253836 or:

Endocrine Nurse Specialist  
Cornwall Diabetes and Endocrine Centre  
Royal Cornwall Hospital  
Truro  
TR1 3LJ

Tel: 01872 254561 / 07823326070

## Further information

For further information contact:

The Pituitary Foundation

Tel: 0845 450 0376

[www.pituitary.org.uk](http://www.pituitary.org.uk)

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690



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