

# The hydrocortisone day curve test

Information and advice for parents and carers

## Paediatrics

### What is the hydrocortisone day curve test?

The hydrocortisone day curve test measures the amount of cortisol in your child's body. Your child needs this test because they are taking hydrocortisone medication to replace cortisol, because their body does not make enough of it.

Cortisol is a hormone that is released by the adrenal glands, which sit at the top of the kidneys. Hormones are chemicals which carry messages to different parts of the body through the bloodstream.

Cortisol is needed to maintain good blood pressure, control blood sugar levels and for general wellbeing. It is released when we experience physical or emotional stress, and then travels to our organs and tissues where it has its effect.

### What is the benefit of the hydrocortisone day curve test?

The benefit of the test is that it enables your child's consultant to check that your child is having the right dose of hydrocortisone medication. If the test shows they are having too much or not enough of the medication, their consultant will be able to change the dose.

### What are the risks of having the hydrocortisone day curve test?

There are no reported risks to having this test.

### What are the risks of not having the test?

If your child does not have the test their consultant will not be able to check the amount of cortisol in your child's body and they are having the right dose of hydrocortisone medication.

### Are there any alternative tests my child can have?

There are no recommended alternatives to this test.

### Preparing for the test

Your child can eat and drink as normal before the test. If your child is also having another test you will be told if they need to stop eating and drinking for this.

You may be asked to miss some doses of your child's steroid medication for 24 hours, but we will tell you if this is necessary because it depends on the type of medication your child takes.

You should explain the test to your child before they come to the hospital so they understand what will happen.

We have a playroom but please feel free to bring your child's favourite toy or comforter with you.

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### How the test is performed

Please arrive on Priory Ground Ward at Sandwell General Hospital at 8.30am. You will have to spend the full morning and early afternoon in hospital. If your child is also having another test you may need to stay longer.

When you arrive on the ward the nurse will check a few details like your child's name, address etc. They will also ask about your child's current state of health, and whether they have any medical problems, or have recently had or been in contact with anyone who has had an infectious illness. This is to check your child is well enough to have the test. The nurse will also give you the opportunity to ask any questions you may have about the test.

Do not worry if your child becomes upset during the test, this is normal and will depend on your child's age and how much they understand about what is happening.

Your child can eat and drink as normal during the test.

This is what will happen:

1. Your child's height and weight will be measured so we can work out the right amount of hydrocortisone to give.
2. 'Magic cream' (called Emla) will be placed on the back of your child's hands and on the inside of their elbows. This is a local anaesthetic cream which numbs the area so that it won't hurt when they have a cannula (small plastic tube) put in. Magic cream takes about 1 hour to work so we will place a clear dressing over the cream to keep it in place.
3. Your child will have their cannula put in by a doctor. The cannula will be put into one of the areas that have been numbed either back of their hand or inside of their elbow. Your child may get anxious or upset when the cannula is being inserted. It will help if you stay with them for comfort.
4. The doctor will then take a small sample of blood from the cannula.
5. You will be asked to give your child doses of hydrocortisone to swallow (either as a tablet or liquid) at specific times.
6. The nurse or doctor will take small samples of blood from the cannula at different times during the test. These will be sent away for testing in the laboratory.

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### After the test

You will be able to go home once your child has had their cannula removed. Your child should eat and drink as normal when they go home.

### How do I get the results of the test?

Your child's doctor will discuss the results of the test with you at your child's next outpatient appointment.

### How to find us

The test will be carried out on Priory Ground Ward at Sandwell General Hospital. This is on the ground floor of the main hospital in the Children's Unit. You can ask for directions at the main reception desk at the main entrance to the hospital. Staff will be happy to direct you to where you need to go.

#### Address:

Sandwell General Hospital  
West Bromwich  
West Midlands  
B71 4HJ

### Contact details

If you have any questions or concerns about the hydrocortisone day curve test please contact:

**Dr Agwu - Consultant Paediatrician**  
0121 507 3358 (secretary)

### Further information

For more information about our hospitals and services please see our websites [www.swbh.nhs.uk](http://www.swbh.nhs.uk), follow us on Twitter @SWBHnhs and like us on Facebook [www.facebook.com/SWBHnhs](http://www.facebook.com/SWBHnhs).

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### Sources used for the information in this leaflet

- British National Formulary for Children, section 6.3 'Corticosteroids', July 2013
- Patient UK Professional Reference, 'Corticosteroids and corticosteroid replacement therapy', December 2010
- 'Diagnostics of Endocrine Function in Children and Adolescents', M.B. Ranke, 2003

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5303 or email: [swb-tr.swbh-gm-patient-information@nhs.net](mailto:swb-tr.swbh-gm-patient-information@nhs.net)



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