Cortisol Day and Night Curve

Test Names: CHILD CORTISOL DAY AND NIGHT CURVE **NON-CAH** DFT or CHILD CORTISOL DAY AND NIGHT CURVE **CAH** DFT

Indication
- Patients with congenital adrenal hyperplasia (CAH) require monitoring to ensure that they are receiving adequate doses of hydrocortisone replacement therapy. The endocrine team at RMCH advocate a 24-hour cortisol curve for CAH patients. A 24-hour cortisol curve may also be appropriate for monitoring corticosteroid therapy for adrenal insufficiency.

Precautions
- None

Preparation
- The patient is required to attend the ETC overnight, continuing to take hydrocortisone as prescribed.

Protocol
1. Insert a reliable cannula in order to collect blood samples at the time points indicated.

2. The time points of blood collection will depend upon the hydrocortisone treatment regimen of the patient. Blood samples for cortisol should be collected pre-dose and then 2 hourly during the day and 4-hourly overnight. In patients with CAH, it may also be useful to collect blood samples for 17-α-hydroxyprogesterone at the same time points. Samples should be collected over a 24-hour period as indicated. The table below is for guidance.

3. All **hydrocortisone doses should be prescribed and administered at exactly the same times as the patient would administer doses at home**. Blood samples should be collected before the next hydrocortisone dose. This information should be written in the day and night curve template and stored with the patient notes.

Time Points: *17OHP is only required in patients with CAH.*

Time (min)	Time point	Sample
16:00	Patient arrival on ward, take initial blood sample	Blood for Cortisol, 17OHP
18:00	2 hrs	Blood for Cortisol, 17OHP
	Patient should take normal night time dose of hydrocortisone	
22:00	6 hrs	Blood for Cortisol, 17OHP
2:00	10 hrs	Blood for Cortisol, 17OHP
6:00	14 hrs	Blood for Cortisol, 17OHP
8:00	16 hours	Blood for Cortisol, 17OHP
	Patient should take normal dose of hydrocortisone	
10:00	18 hrs	Blood for Cortisol, 17OHP
12:00	20 hrs	Blood for Cortisol, 17OHP
14:00	22 hrs	Blood for Cortisol, 17OHP
	Patient should take normal dose of hydrocortisone	

Samples
Cortisol   1.2 mL lithium heparin (orange top) or clotted blood (white top)

17–OHP   1.2 mL lithium heparin (orange top) or clotted blood (white top)

Cortisol Day and Night Curve Template

Date:

Name: Date of Birth: Hospital Number:

IMPORTANT – please remember to take blood samples for cortisol/ACTH **prior** to giving morning dose.

Normal dosage regimen (times/dose) **-**

Please fill in chart below with times that cortisol samples have been taken as well as the time and dose of any medication given.

Time medication given (include dose)	Time cortisol/ACTH samples were taken	Result
	A **pre-dose** sample is always required	