

## Cortisol Day Curve – Assessment of adrenal function

Test Name: CHILD CORTISOL DAY CURVE – ASSESSMENT OF ADRENAL FUNCTION DFT

### Indication

- Monitoring endogenous secretion of cortisol and ACTH may be rarely used in the assessment of adrenal function in order to further support the diagnostic work up.
- Patients with exogenous suppression of ACTH are evaluated for recovery of the hypothalamic-pituitary-adrenal axis by monitoring endogenous secretion of cortisol and ACTH during a period of time when patients have stopped taking corticosteroids.

### Precautions

- None

### Preparation

- For assessment of recovery of the hypothalamic-pituitary-adrenal axis steroid therapy should be stopped. All glucocorticoid therapy (other than dexamethasone or betamethasone) interferes with the assay of cortisol. If the patient is on prednisolone therapy, this must be discontinued for 24 hours prior to the test. If the patient is on a supra-physiological dose of hydrocortisone, this should be reduced to a physiological level (6 micrograms/m<sup>2</sup>/day) prior to the test. Omit the dose the night before and on the morning of the test. However, the patient should take their usual dose of corticosteroid as soon as the test is completed.

### Protocol

- Insert a reliable cannula in order to collect blood samples at the time points indicated.
- Blood samples for cortisol should be collected 2 hourly in order to assess the diurnal variation of secretion. ACTH samples should be collected every 4 hours. The table below is for guidance.
- If it is felt there is clinical need to continue to monitor adrenal function this profile can be continued as indicated with blood samples for cortisol every 2 hours and for ACTH every 4 hours

### Time Points:

Time	Time point	Sample
08:00 or on patient arrival	Baseline	Blood for Cortisol/ACTH
10:00	2 hrs	Blood for Cortisol
12:00	4 hrs	Blood for Cortisol/ACTH
14:00	6 hrs	Blood for Cortisol

### Samples

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

**ACTH** 1.8 mL EDTA tube (pink top)  
**Send IMMEDIATELY to laboratory on ice for centrifugation and freezing**