

Department:	Biochemistry		
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Document title:	Endocrine Dynamic Function Test Protocols - Adults		

Cortisol Day Curve on Metyrapone

Indications

Assessment of biochemical control of Cushing's disease on Metyrapone.
To provide an indication of the average concentration of cortisol to which the tissues are exposed.

Contraindications

None required.

Requirements

- IV cannula
- Patient's metyrapone therapy
- 5 x brown top serum tubes

Procedure

PATIENT PREPARATION

- Patients are NOT required to fast prior to testing
- Oral oestrogen therapy must be stopped 6 weeks prior to the day curve otherwise it is difficult to interpret because of the oestrogen induced rise in CBG
- Timing of samples may vary for each patient, example timings given below
- Record time and dose of medications and time each sample is collected.

Sample No.	Time	Procedure	Sample
	On arrival	Insert <i>iv</i> cannula	
1	09:00	Take sample for cortisol	1 x brown top serum tube
2	12:00	Take sample for cortisol	1 x brown top serum tube
3	15:00	Take sample for cortisol	1 x brown top serum tube
4	18:00	Take sample for cortisol	1 x brown top serum tube
5	21:00	Take sample for cortisol	1 x brown top serum tube

Interpretation of results

A mean serum cortisol between 150 and 300 nmol/L is compatible with a normal production rate. Patients with a higher mean value generally require an increase in therapy, and patients with a lower mean value a reduction.

11 Deoxycortisol and other cortisol precursors accumulate in patients on metyrapone and they cross-react in the cortisol assays, therefore samples are requested for measurement of cortisol by mass spectrometry in these patients.

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