

## Dexamethasone Suppression Test - Low Dose Overnight - Summary Clinical Guideline

Reference no.: CHISCG5

### 1. Guideline

#### INDICATIONS

As a first-line screening test to exclude Cushing's syndrome

#### CONTRAINDICATIONS

None

#### SIDE EFFECTS

None

#### PRECAUTIONS

This procedure may be contraindicated in patients with active peptic ulcer disease.

#### PREPARATION

##### Planning

Out-patients should be fully briefed on when to take the dexamethasone and to return the following morning for a blood test at 9am. Patients should be instructed not to take the dexamethasone on a Friday or Saturday night.

If the patient is collecting a 24hr urine sample for urinary free cortisol, this should be completed before taking the dexamethasone.

##### Equipment

2 x 500 microgram tablets dexamethasone

#### PROCEDURE

##### Out-Patients

Supply the patient with a 1 mg dose of dexamethasone (2 x 500 microgram tablets). Instruct the patient to take both tablets together, between 23:00 and midnight.

Give the patient a completed request form, for a post-Dexamethasone cortisol and instruct them to attend for a blood test the following morning between 08:30 and 09:30 at a suitably convenient laboratory location. A single sample for serum cortisol should be collected into a SST, yellow top vacutainer tube.

##### In-Patients

This test should only be performed on in-patients after discussion with a consultant endocrinologist. Give the patient 1 mg dexamethasone between 23:00 and midnight. Between 08:30 and 09:30 take a (blood) sample for cortisol into a SST, yellow top vacutainer tube.

Send blood sample with completed request form, for post-dexamethasone cortisol, to the Chemical Pathology Department.

### **INTERPRETATION**

Normal suppression is indicated by a 09:00 serum cortisol concentration of less than 50 nmol/L.

Note that failure of cortisol suppression can also occur in:

1. Severe endogenous depression - these patients may have abnormal circadian rhythm.
2. Alcoholism (pseudo-Cushing's syndrome)
3. Severe stressful illness/infection - the test should not be performed in this situation.
4. Hepatic enzyme-inducing drugs - (phenytoin, phenobarbitone, rifampicin, etc). These may cause more rapid metabolism of dexamethasone, such that normal suppression of the pituitary-adrenal axis fails.
5. Pregnancy or Oestrogen therapy - induces high levels of cortisol binding globulin, such that the test is not interpretable.
6. Failure to take dexamethasone correctly - check with patient.
7. Glucocorticoid resistance syndrome - rare, familial disorder and patients are not Cushingoid.
8. Obesity
9. Renal failure