

LABORATORY COLLECTION MANUAL	COSYNTROPIN STIMULATION TEST
Effective Date: 1-2004	Page 1 of 1

I. PURPOSE OF TEST:

Severe hypo function of the pituitary-adrenal axis is usually associated with low plasma cortisol levels. However, a basal level is not always evidence of adrenal insufficiency and does not give adequate information to make the diagnosis. Many patients that have been diagnosed with adrenal insufficiency have normal basal cortisol levels. An abnormal cortisol level only occurs when the patient is stressed. For this reason a criterion that should be used in establishing the diagnosis is the failure to respond to adequate corticotrophin stimulation. When presumptive adrenal insufficiency is diagnosed by a low **COSYNTROPIN STIMULATION TEST**, further studies are indicated to determine if it is primary or secondary.

II. DOSAGE AND ADMINISTRATION

COSYNTROPIN for injection may be administered as a direct intravenous injection when used as a rapid screening test of adrenal function. It can be given IV over a 4-8 hour period. Dosage and administration is per physician's orders.

III. TESTING PROTOCOL

- A. Order a **COSYNTROPIN STIMULATION TEST—CORTISOL 2 SPECIMEN (CORT2SP)**.
- B. Laboratory staff will draw a control (basal) blood sample for cortisol testing just prior to the administration of the medication.
- C. Nursing Administers the **COSYNTROPIN**
- D. Laboratory staff will then draw a second blood sample for cortisol testing exactly 30 minutes after the medication is given.

IV. EXPECTED RESULTS:

- A. The control cortisol level should exceed 5 micrograms/deciliter. (Range is 5µ/dl -25µ/dl)
- B. The normal response is an approximate doubling of the basal plasma cortisol level. The 30-minute specimen should show an increase of at least 7µ/dl.
- C. The 30-minute specimen should exceed 18µ/dl.

V. PROCEDURE NOTES:

- A. The usual normal response to the medication is an approximate doubling of the basal level, provided that the basal level does not exceed the normal range.
- B. Patients receiving cortisone, hydrocortisone or spironolactone or estrogen make exhibit high basal levels.
- C. A paradoxical response may be noted in the cortisone or hydrocortisone group as seen in a decrease of the plasma cortisol values following a stimulating does of the Cosyntropin.

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See original policy in the Laboratory for all documented annual reviews.

Reference:
Cosyntropin Injection Package insert, Sandoz