

CORTISOL STIMULATION BY ACTH, SERUM (CLIA)			
Cortisol, Basal		ug/dL	4.30 – 22.40
Cortisol Post ACTH stimulation			
30 minutes		ug/dL	Peak concentration > 20
60 minutes		ug/dL	Peak concentration > 20

Note: Stimulant is 250 ug maximum or 10 ug/ kg body weight Synthetic ACTH (Synacthen) administered IV / IM.

Interpretation

A peak serum cortisol concentration of > 20 ug/dL is a normal response. Peak value is more important than incremental change because it may not be seen in patients who are tested at times of stress, when their adrenal output of cortisol is already maximally stimulated by endogenous ACTH.

Comments

- Patients with adrenal destruction (Addison's disease) do not show any change in serum cortisol level after ACTH administration
- Patients with atrophy of adrenal cortex caused by exogenous glucocorticoid treatment or dysfunction of pituitary gland or hypothalamus may show a slight rise in serum cortisol level but not one of normal magnitude