

FELINE ACTH STIMULATION TEST

SAMPLE REQUIRED:

Serum (0.5 mL) or clotted blood (1.5 mL)

BLOOD TUBE REQUIRED:

Gel (gold top) or plain (red top) tubes

Indications

- To assist in the diagnosis of hyperadrenocorticism and iatrogenic hyperadrenocorticism.
- Hypoadrenocorticism (Addison's disease) is extremely rare in cats; an ACTH stimulation test should only be considered when all other potential causes for the illness being investigated have been excluded.

Collection protocol

- If glucocorticoids have been administered recently, refer to Notes below.
- Maintain the cat in a stress free environment.
- In the morning, collect a resting blood sample and label it "0 h".
- Administer synthetic ACTH (e.g. Synacthen®Novartis) (non-depot formulation) at 125 ug/cat IM or IV.
- Collect a 30 minute post-ACTH blood sample and label it '30 mins'.
- Collect a 60 minute post-ACTH blood sample and label it '60 mins'.
- Store samples at 4°C and submit both samples together to the laboratory. If transport to the laboratory will be delayed (> 12 hours), the sample should be centrifuged and the serum separated.
- On the laboratory submission form, list samples and collection intervals, note the reason for testing and note any recent corticosteroid therapy.

Notes

In cats, sensitivity of the ACTH stimulation test for diagnosis of hyperadrenocorticism is poor (estimates vary from 30 – 50%). A low dose dexamethasone suppression test or the urine cortisol:creatinine ratio screening test may be preferred.

Specific testing for hyperadrenocorticism should not be performed in unwell or significantly stressed animals, which may yield false positive results in adrenal function tests. In potentially hyperadrenocorticoid cats with significant intercurrent disease such as diabetic ketoacidosis or pancreatitis, adrenal function testing should be delayed until intercurrent disease is controlled.

Any form of corticosteroid therapy may interfere with adrenal function tests, by (a) cross-reacting in the cortisol assay (**except for** dexamethasone), or (b) affecting the pituitary/adrenal axis via suppression of ACTH production. As a guide, the minimum periods for which corticosteroid therapy should be withheld before an ACTH stimulation test are:

Injectable (short acting)	7 days (48 h if dexamethasone)
Oral	2 weeks
Topical	2 weeks
Injectable (depot)	2 months