

ACTH test

The **ACTH** test (also called the **cosyntropin**, tetracosactide, or Synacthen test) is a medical test usually ordered and interpreted by endocrinologists to assess the functioning of the **adrenal glands** stress response by measuring the adrenal response to **adrenocorticotrophic hormone** (ACTH; **corticotropin**) or another corticotropic agent such as tetracosactide (cosyntropin, tetracosactrin; Synacthen) or alsactide (Synchrodyn).

Despite widespread use of the 250-mcg Cosyntropin test (ACTH test) for the diagnosis of **adrenal insufficiency** (AI), the effect of time of day and the utility of performing both 30- and 60-min serum cortisol values remains unclear.

Munro et al. found that outcomes from ACTH testing are not affected by time of day. Furthermore, using a 30-min cortisol level in isolation results in more than one in seven patients having a false positive diagnosis of AI; a 60-min value of ≥ 500 nmol/L alone may be sufficient to diagnose AI in $>99\%$ of cases ¹⁾.

¹⁾

Munro V, Elnenaei M, Doucette S, Clarke DB, Imran SA. The effect of time of day testing and utility of 30 and 60 minute cortisol values in the 250 mcg ACTH stimulation test. Clin Biochem. 2018 Feb 16. pii: S0009-9120(17)31238-9. doi: 10.1016/j.clinbiochem.2018.02.010. [Epub ahead of print] PubMed PMID: 29458002.

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Last update: **2025/05/13 02:01**

