

# ACTH Stimulation Test — Patient Instructions

Testing adrenal gland function — what to expect and how to prepare

## What Is the ACTH Stimulation Test?

The ACTH stimulation test (also called the cosyntropin test or cortrosyn test) measures how well your adrenal glands respond to a synthetic form of ACTH — the hormone that normally signals the adrenal glands to produce cortisol. It is used to diagnose adrenal insufficiency (Addison's disease and secondary adrenal insufficiency).

A normal adrenal gland responds to ACTH by rapidly increasing cortisol production. If the adrenal glands are damaged or suppressed, they cannot mount this response.

## Before the Test

- **Fasting is not required** — you may eat and drink normally before the test.
- **Timing:** The test is best performed in the morning (ideally between 8–10 AM) when cortisol is naturally highest.
- **Arrive on time** — the test involves blood draws at specific time intervals.

## Medications to Discuss With Your Doctor

■ **Do NOT stop any medications without your doctor's instruction. Some medications must be held before the test; others are safe to continue. Always confirm with your doctor.**

Medication	Effect on Test	What to Do
Hydrocortisone	Directly raises cortisol — will falsely normalize test	Hold on the morning of the test (doctor's instructions)
Prednisone, dexamethasone, methylprednisolone	May suppress adrenal function or cross-react with cortisol assay	Discuss with your doctor
Birth control pills or estrogen	Elevate cortisol-binding proteins — can affect total cortisol	Inform your doctor; usually continue
Spironolactone	No significant effect on cortisol assay	Continue as normal
Metformin, levothyroxine, blood pressure meds	No significant effect	Continue as normal

## What Happens During the Test

**Baseline blood draw (Time 0):** A blood sample is collected for baseline cortisol and ACTH levels.

**Injection of cosyntropin:** A synthetic form of ACTH (cosyntropin, 250 mcg) is injected intravenously or intramuscularly. This is not a medication — it is a diagnostic agent. Side effects are rare.

**Second blood draw (30 minutes):** A blood sample is collected for cortisol.

**Third blood draw (60 minutes):** A final blood sample is collected for cortisol. Some protocols only go to 30 minutes.

## Interpreting Results

A **normal response** is a peak cortisol level of 18–20 mcg/dL or higher at 30 or 60 minutes. A lower peak suggests adrenal insufficiency. Your doctor will review the results in the context of your symptoms, medical history, and other test results.

## After the Test

- You can eat, drink, and resume normal activities immediately after the test.
- If you normally take hydrocortisone and held it for the test, take your normal dose as soon as the test is complete.
- Results are typically available within 1–2 business days. Your doctor's office will contact you.

**Your Appointment:** Test date: \_\_\_\_\_ · Location: \_\_\_\_\_ · Time: \_\_\_\_\_ · Questions:  
832-968-7003