CLINICAL SUSPICION
Weakness, fatigue, nausea, musculoskeletal pain, dizziness, volume depletion, abdominal pain, hypotension, hyponatremia, hyperkalemia, hyperpigmentation, hypoglycemia

For a patient in adrenal crisis, defer diagnostic workup until the patient is stabilized.

ORDER
ACTH stimulation test
AND
Baseline ACTH test

ADDITIONAL TESTING
Measure aldosterone and renin concentrations

Normal cortisol response
Adrenal insufficiency not likely

Low cortisol response
Adrenal insufficiency likely

High baseline ACTH
Primary adrenal insufficiency

Low or normal baseline ACTH
Secondary adrenal insufficiency

For infants and patients with suspected CAH
ORDER
17-hydroxyprogesterone test
Markedly elevated
CAH
Refer to the ARUP Consult Congenital Adrenal Hyperplasia topic
Mildly elevated or normal
Genetic syndromes

For patients >6 mos of age
ORDER
21-hydroxylase antibody test
Negative
Even with undetectable antibodies, autoimmune etiology is still most likely
Also consider other etiologies, such as:
- Steroid drug replacement
- CAH
- Adrenoleukodystrophy
- Infection
- Cancer
Positive
Autoimmune adrenal insufficiency

Abbreviations
ACTH Adrenocorticotropic hormone
CAH Congenital adrenal hyperplasia