Clinical suspicion
Weakness, fatigue, nausea, musculoskeletal pain, dizziness, volume depletion, abdominal pain, hypotension, hyponatremia, hyperkalemia, hyperpigmentation, hypoglycemia

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

ORDER
Adrenocorticotropic hormone (ACTH) stimulation test
AND
Baseline plasma ACTH

ADDITIONAL TESTING
Measure aldosterone and renin

Normal cortisol response
Low cortisol response

Adrenal insufficiency not likely
Adrenal insufficiency likely

High baseline ACTH
Low or normal baseline ACTH

Primary adrenal insufficiency
Secondary adrenal insufficiency

Evaluate pituitary function
See Hypopituitarism (Anterior Pituitary) Testing Algorithm

For infants and patients with suspected congenital adrenal hyperplasia (CAH)
ORDER
17-hydroxyprogesterone

Markedly elevated
Mildly elevated or normal

CAH
See ARUP Consult topic
Genetic syndromes

Even with undetectable antibodies, autoimmune etiology is still most likely
Also consider other etiologies
- Steroid drug replacement
- CAH
- Adrenoleukodystrophy
- Infection
- Cancer

Autoimmune adrenal insufficiency

For patients >6 months
ORDER
21-hydroxylase antibody testing

Negative
Positive

Even with undetectable antibodies, autoimmune etiology is still most likely
Also consider other etiologies
- Steroid drug replacement
- CAH
- Adrenoleukodystrophy
- Infection
- Cancer

Autoimmune adrenal insufficiency