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

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

Markedly elevated
Mildly elevated or normal

CAH
See Congenital Adrenal Hyperplasia 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

For patients >6 months
ORDER
21-hydroxylase antibody testing

Negative
Positive

Evaluate pituitary function
See Hypopituitarism (Anterior Pituitary) Testing Algorithm

ARUP Test List
Adrenocorticotropic Hormone 0070010
Adrenocorticotropic Hormone Stimulation, 0 Minutes 0070031
Adrenocorticotropic Hormone Stimulation, 30 Minutes 0070032
Adrenocorticotropic Hormone Stimulation, 60 Minutes 0070033
Aldosterone/Renin Activity Ratio 0070073
Aldosterone and Renin, Direct with Ratio 2002582
21-Hydroxylase Autoantibodies, Serum 3001962
17-Hydroxyprogesterone Quantitative by HPLC-MS/MS, Serum or Plasma 0092332