MAYO CLINIC
Mayo Medical Laboratories

Test Definition: CAH21

Congenital Adrenal Hyperplasia (CAH) Profile for 21-Hydroxylase Deficiency

Reporting Title: CAH 21-Hydroxylase Profile
Performing Location: Rochester

Specimen Requirements:

Container/Tube: Red top
Specimen Volume: 0.6 mL
Collection Instructions:
1. Morning (8 a.m.) and afternoon (4 p.m.) specimens are preferred.
2. Include time of draw.
Additional Information: If multiple specimens are drawn, send separate order for each specimen.

Specimen Type	Temperature	Time
Serum Red	Refrigerated (preferred)	7 days
	Frozen	14 days

Ask at Order Entry (AOE) Questions:

Test ID	Question ID	Description	Type	Reportable
CORTI	COLT1	Collection Time in Military Time	Plain Text	No

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
30040	Cortisol, S	Numeric	mcg/dL	2143-6
30070	AM Cortisol	Numeric	mcg/dL	9813-7
30071	PM Cortisol	Numeric	mcg/dL	9812-9
30041	Androstenedione, S	Numeric	ng/dL	1854-9
30042	17-Hydroxyprogesterone, S	Numeric	ng/dL	1668-3

Components:

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately

Test ID	Reporting Name	CPT Units	CPT Code	Always Performed	Orderable Separately
CORTI	Cortisol, S	1	82533	Yes	Yes (order CINP)
ANDRO	Androstenedione, S	1	82157	Yes	Yes (order ANST)
H17	17-Hydroxyprogesterone, S	1	83498	Yes	Yes (order OHPG)

Reference Values:

CORTISOL
5-25 mcg/dL (a.m.)
2-14 mcg/dL (p.m.)
Pediatric reference ranges are the same as adults, as confirmed by peer-reviewed literature.
Petersen KE: ACTH in normal children and children with pituitary and adrenal diseases. I. Measurement in plasma by radioimmunoassay-basal values. Acta Paediatr Scand 1981;70:341-345

ANDROSTENEDIONE
PEDIATRICS* Premature infants 26-28 weeks, day 4: 92-282 ng/dL 31-35 weeks, day 4: 80-446 ng/dL Full-term infants 1-7 days: 20-290 ng/dL 1 month-1 year: <69 ng/dL

Males*

Tanner Stages	Age (Years)	Reference Range (ng/dL)
Stage I (prepubertal)	<9.8	<51
Stage II	9.8-14.5	31-65
Stage III	10.7-15.4	50-100
Stage IV	11.8-16.2	48-140
Stage V	12.8-17.3	65-210

Females*

Tanner Stages	Age (Years)	Reference Range (ng/dL)
Stage I (prepubertal)	<9.2	<51
Stage II	9.2-13.7	42-100
Stage III	10.0-14.4	80-190
Stage IV	10.7-15.6	77-225
Stage V	11.8-18.6	80-240

*Source: Androstenedione. In Pediatric Reference Ranges. Fourth Edition. Edited by SJ Soldin, C Brugnara, EC Wong. Washington, DC, AACC Press, 2003, pp 32-34

ADULTS Males: 40-150 ng/dL Females: 30-200 ng/dL

17-HYDROXYPROGESTERONE
Children
Preterm infants: Preterm infants may exceed 630 ng/dL, however, it is uncommon to see levels reach 1,000 ng/dL.
Term infants
0-28 days: <630 ng/dL
Levels fall from newborn (<630 ng/dL) to prepubertal gradually within 6 months.
Prepubertal males: <110 ng/dL
Prepubertal females: <100 ng/dL
Adults
Males: <220 ng/dL
Females
Follicular: <80 ng/dL
Luteal: <285 ng/dL
Postmenopausal: <51 ng/dL
Note: For pregnancy reference ranges, see: Soldin OP, Guo T, Weiderpass E, et al: Steroid hormone levels in pregnancy and 1 year postpartum using isotope dilution tandem mass spectrometry. Fertil Steril 2005 Sept;84(3):701-710