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**Lab Dept:** Chemistry

**Test Name:** 17-OH PREGNENOLONE, SERUM

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***General Information***

**Order Code:** 17OH

**Synonyms:** 17-Hydroxypregnenolone

**CPT Codes:** 84143 – 17- hydroxypregnenolone

**Test Includes:** 17-OH Pregnenolone level reported in ng/dL.

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***Logistics***

**Test Indications:** As an ancillary test for congenital adrenal hyperplasia (CAH), particularly in situations in which diagnosis of 21-hydroxylase and 11-hydroxylase deficiency have been ruled out. Confirming a diagnosis of 3-beta-hydroxy dehydrogenase (3-beta-HSD) deficiency. Analysis for 17-hydroxypregnenolone is also useful as part of a battery of tests to evaluate females with hirsutism or infertility; both can result from adult onset CAH.

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Mayo Clinic Laboratories (Mayo test: 17OHP)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 - 6 days, performed Monday, Tuesday, Thursday

**Special Instructions:** N/A

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***Specimen***

**Specimen Type:** Blood

**Container:** Preferred: Red NO GEL  
Alternate: SST (Gold or marble)

**Draw Volume:** 3 mL (Minimum: 1.5 mL) blood

**Processed Volume:** 1 mL (Minimum: 0.5 mL) serum

**Collection:** Routine blood collection

**Special Processing:** Lab Staff: Centrifuge specimen. Remove serum aliquot into a screw-capped round bottom plastic vial. Store and ship at frozen temperatures. Forward promptly.

**Patient Preparation:** None

**Sample Rejection:** Mislabeled or unlabeled specimens

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***Interpretive***

**Reference Range:**

| <b>Premature Infants:</b> |                     |                       |
|---------------------------|---------------------|-----------------------|
| <b>Age</b>                | <b>Male (ng/dL)</b> | <b>Female (ng/dL)</b> |
| 26 - 28 weeks             | 1219 - 9799         | 1219 - 9799           |
| 29 – 36 weeks             | 346 - 8911          | 346 - 8911            |
| Full Term (1-5 months):   | 229 - 3104          | 229 - 3104            |
| 6 months – 1 year         | 221 -1981           | 221 -1981             |
| 1 -2 years                | 35 - 712            | 35 - 712              |
| 3 – 6 years               | <277                | <277                  |
| 7 – 9 years               | <188                | <213                  |
| 10 – 12 years             | <393                | <399                  |
| 13 – 15 years             | 35 - 465            | <408                  |
| 16 – 17 years             | 32 - 478            | <424                  |
| <b>Tanner Stages:</b>     | <b>Male</b>         | <b>Female</b>         |
| Stage I                   | <209                | <236                  |
| Stage II                  | <356                | <368                  |
| Stage III                 | <451                | <431                  |
| Stage IV-V                | 35 - 478            | <413                  |

| <b>Adults:</b> | <b>Male</b> | <b>Female</b> |
|----------------|-------------|---------------|
| ≥18 years      | 55 - 455    | 31 - 455      |

**Critical Values:**

N/A

**Limitations:**

At birth, the hypothalamic-pituitary-adrenal axis and the hypothalamic-pituitary gonadal axis are activated and adrenal and sex steroid levels are high. In preterm infants, the elevations can be more pronounced due to illness and stress. As a result, preterm infants may occasionally have 17-hydroxypregnenolone levels of up to 9,799 ng/dL. Term infants (0-28 days) will have levels <3,104 ng/dL. These then fall over the following 2 years to prepubertal levels of <277 ng/dL.

**Methodology:**

Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**References:**

[Mayo Clinic Laboratories](#) (August 2021)

**Updates:**

9/29/2009: Method, reference range update  
8/23/2021: Moved from ESL to Mayo