

HOTLINE: Effective February 22, 2022

0070102

Testosterone, Bioavailable and Total, Includes Sex Hormone-Binding Globulin  
(Adult Males or Individuals on Testosterone Hormone Therapy)

BIO T

Reference Interval:

Test Number	Components	Reference Interval																																																
0070111	Testosterone, Free (Adult Males or Individuals on Testosterone Hormone Therapy)	<b>Male:</b> 14-15 years: 3-138 pg/mL 16-17 years: 38-173 pg/mL 18 years and older: 47-244 pg/mL  Tanner Stage IV: 35-169 pg/mL Tanner Stage V: 41-239 pg/mL																																																
0070130	Testosterone (Adult Males or Individuals on Testosterone Hormone Therapy)	<b>Male:</b> 14-15 years: 33-585 ng/dL 16-17 years: 185-886 ng/dL 18-39 years: 300-1080 ng/dL 40-59 years: 300-890 ng/dL 60 years and older: 300-720 ng/dL  Tanner Stage IV: 165-854 ng/dL Tanner Stage V: 194-783 ng/dL																																																
0099375	Sex Hormone-Binding Globulin	<b>Effective February 22, 2022</b> <table> <tr> <th>Age</th><th>Male</th><th>Female</th></tr> <tr> <td>1-30 days</td><td>13-85 nmol/L</td><td>14-60 nmol/L</td></tr> <tr> <td>31-364 days</td><td>70-250 nmol/L</td><td>60-215 nmol/L</td></tr> <tr> <td>1-3 years</td><td>50-180 nmol/L</td><td>60-190 nmol/L</td></tr> <tr> <td>4-6 years</td><td>45-175 nmol/L</td><td>55-170 nmol/L</td></tr> <tr> <td>7-9 years</td><td>28-190 nmol/L</td><td>35-170 nmol/L</td></tr> <tr> <td>10-12 years</td><td>23-160 nmol/L</td><td>17-155 nmol/L</td></tr> <tr> <td>13-15 years</td><td>13-140 nmol/L</td><td>11-120 nmol/L</td></tr> <tr> <td>16-17 years</td><td>10-60 nmol/L</td><td>19-145 nmol/L</td></tr> <tr> <td>18-49 years</td><td>17-56 nmol/L</td><td>25-122 nmol/L</td></tr> <tr> <td>50 years and older</td><td>19-76 nmol/L</td><td>17-125 nmol/L</td></tr> <tr> <td>Tanner Stage I</td><td>26-186 nmol/L</td><td>30-173 nmol/L</td></tr> <tr> <td>Tanner Stage II</td><td>22-169 nmol/L</td><td>16-127 nmol/L</td></tr> <tr> <td>Tanner Stage III</td><td>13-104 nmol/L</td><td>12-98 nmol/L</td></tr> <tr> <td>Tanner Stage IV</td><td>11-60 nmol/L</td><td>14-151 nmol/L</td></tr> <tr> <td>Tanner Stage V</td><td>11-71 nmol/L</td><td>23-165 nmol/L</td></tr> </table>	Age	Male	Female	1-30 days	13-85 nmol/L	14-60 nmol/L	31-364 days	70-250 nmol/L	60-215 nmol/L	1-3 years	50-180 nmol/L	60-190 nmol/L	4-6 years	45-175 nmol/L	55-170 nmol/L	7-9 years	28-190 nmol/L	35-170 nmol/L	10-12 years	23-160 nmol/L	17-155 nmol/L	13-15 years	13-140 nmol/L	11-120 nmol/L	16-17 years	10-60 nmol/L	19-145 nmol/L	18-49 years	17-56 nmol/L	25-122 nmol/L	50 years and older	19-76 nmol/L	17-125 nmol/L	Tanner Stage I	26-186 nmol/L	30-173 nmol/L	Tanner Stage II	22-169 nmol/L	16-127 nmol/L	Tanner Stage III	13-104 nmol/L	12-98 nmol/L	Tanner Stage IV	11-60 nmol/L	14-151 nmol/L	Tanner Stage V	11-71 nmol/L	23-165 nmol/L
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Component	Reference Interval
Testosterone, Bioavailable, Adult Male	14-15 years: 10-337 ng/dL 16-17 years: 35-509 ng/dL 18 years and older: 131-682 ng/dL  Tanner Stage IV: 40-485 ng/dL Tanner Stage V: 124-596 ng/dL
Testosterone, Percentage Free, Adult Male	1.6-2.9%

**Interpretive Data:** Bioavailable testosterone concentration is calculated using total testosterone (measured by immunoassay) and the binding constant of testosterone and sex hormone-binding globulin (SHBG) and/or albumin. Testosterone immunoassays are both imprecise and inaccurate at low testosterone concentrations, such as those found in children and cisgender females. For these individuals, testing by mass spectrometry is recommended; refer to Testosterone, Bioavailable and Total, Includes Sex Hormone-Binding Globulin (Adult Females, Children, or Individuals on Testosterone-Suppressing Hormone Therapy) (ARUP test code 0081057).

For individuals on testosterone hormone therapy, refer to cisgender male reference intervals. No reference intervals have been established for males younger than 14 years or for cisgender females. For a complete set of all established reference intervals, refer to [ltd.aruplab.com/Tests/Pub/0070102](http://ltd.aruplab.com/Tests/Pub/0070102).

**Note:** Bioavailable testosterone includes free plus weakly bound (non-SHBG bound) testosterone. Bioavailable testosterone is an assessment of the biologically active testosterone in serum.

**HOTLINE NOTE:** There is a clinically significant charting name change associated with this test.

Change the charting name for component 0070130, Testosterone, Adult Male from Testosterone, Adult Male to **Testosterone by Immunoassay**.