

| Test | Current Ranges | Updated Ranges | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---|---|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|------------------|----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-----------------|--|
| Albumin | 3.3 to 5.5 g/dL | <p>Males</p> <p>0-14 days: 3.3 to 4.5 g/dL 15-364 days: 2.8 to 4.7 g/dL 1-7 years: 3.8 to 4.7 g/dL 8-14 years: 4.1 to 4.8 g/dL 15-18 years: 4.1 to 5.1 g/dL 19-60 years: 3.5 to 5.2 g/dL 61 – 90 years: 3.2 to 4.6 g/dL >90 years: 2.9 to 4.5 g/dL</p> <p>Females</p> <p>0-14 days: 3.3 to 4.5 g/dL 15-364 days: 2.8 to 4.7 g/dL 1-7 years: 3.8 to 4.7 g/dL 8-14 years: 4.1 to 4.8 g/dL 15-18 years: 4.0 to 4.9 g/dL 19-60 years: 3.5 to 5.2 g/dL 61 – 90 years: 3.2 to 4.6 g/dL >90 years: 2.9 to 4.5 g/dL</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ALP | <p>Males (Years)</p> <table border="1" data-bbox="354 848 769 1104"> <tbody> <tr><td>4: 149-369 U/L</td><td>12: 185-562 U/L</td></tr> <tr><td>5: 179-416 U/L</td><td>13: 182-587 U/L</td></tr> <tr><td>6: 179-417 U/L</td><td>14: 166-571 U/L</td></tr> <tr><td>7: 172-405 U/L</td><td>15: 138-511 U/L</td></tr> <tr><td>8: 169-401 U/L</td><td>16: 102-417 U/L</td></tr> <tr><td>9: 175-411 U/L</td><td>17: 69-311 U/L</td></tr> <tr><td>10: 191-435 U/L</td><td>18: 52-222 U/L</td></tr> <tr><td>11: 185-507 U/L</td><td>>18: 45-115 U/L</td></tr> </tbody> </table> <p>Females (Years)</p> <table border="1" data-bbox="354 1159 769 1478"> <tbody> <tr><td>4: 169-372 U/L</td><td>14: 153-362 U/L</td></tr> <tr><td>5: 162-355 U/L</td><td>15: 75-274 U/L</td></tr> <tr><td>6: 169-370 U/L</td><td>16: 61-264 U/L</td></tr> <tr><td>7: 183-402 U/L</td><td>17-23: 52-144 U/L</td></tr> <tr><td>8: 199-440 U/L</td><td>24-45: 37-98 U/L</td></tr> <tr><td>9: 212-468 U/L</td><td>46-50: 39-100 U/L</td></tr> <tr><td>10: 215-476 U/L</td><td>51-55: 41-108 U/L</td></tr> <tr><td>11: 178-526 U/L</td><td>56-60: 46-118 U/L</td></tr> <tr><td>12: 133-485 U/L</td><td>61-65: 50-130 U/L</td></tr> <tr><td>13: 120-449 U/L</td><td>>65: 55-142 U/L</td></tr> </tbody> </table> | 4: 149-369 U/L | 12: 185-562 U/L | 5: 179-416 U/L | 13: 182-587 U/L | 6: 179-417 U/L | 14: 166-571 U/L | 7: 172-405 U/L | 15: 138-511 U/L | 8: 169-401 U/L | 16: 102-417 U/L | 9: 175-411 U/L | 17: 69-311 U/L | 10: 191-435 U/L | 18: 52-222 U/L | 11: 185-507 U/L | >18: 45-115 U/L | 4: 169-372 U/L | 14: 153-362 U/L | 5: 162-355 U/L | 15: 75-274 U/L | 6: 169-370 U/L | 16: 61-264 U/L | 7: 183-402 U/L | 17-23: 52-144 U/L | 8: 199-440 U/L | 24-45: 37-98 U/L | 9: 212-468 U/L | 46-50: 39-100 U/L | 10: 215-476 U/L | 51-55: 41-108 U/L | 11: 178-526 U/L | 56-60: 46-118 U/L | 12: 133-485 U/L | 61-65: 50-130 U/L | 13: 120-449 U/L | >65: 55-142 U/L | <p>Males</p> <p>0-14 days: 90 to 273 U/L 15-364 days: 134 to 518 U/L 1-9 years: 156 to 369 U/L 10-12 years: 141 to 460 U/L 13-14 years: 127 to 517 U/L 15-16 years: 89 to 365 U/L >17 years: 40 to 150 U/L</p> <p>Females</p> <p>0-14 days: 90 to 273 U/L 15-364 days: 134 to 518 U/L 1-9 years: 156 to 369 U/L 10-12 years: 141 to 460 U/L 13-14 years: 62 to 280 U/L 15-16 years: 54 to 128 U/L 17 to 18 years: 48 to 95 U/L >18 years: 40 to 150 U/L</p> |
| 4: 149-369 U/L | 12: 185-562 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5: 179-416 U/L | 13: 182-587 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6: 179-417 U/L | 14: 166-571 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7: 172-405 U/L | 15: 138-511 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8: 169-401 U/L | 16: 102-417 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9: 175-411 U/L | 17: 69-311 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10: 191-435 U/L | 18: 52-222 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11: 185-507 U/L | >18: 45-115 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4: 169-372 U/L | 14: 153-362 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5: 162-355 U/L | 15: 75-274 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6: 169-370 U/L | 16: 61-264 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7: 183-402 U/L | 17-23: 52-144 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8: 199-440 U/L | 24-45: 37-98 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9: 212-468 U/L | 46-50: 39-100 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10: 215-476 U/L | 51-55: 41-108 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11: 178-526 U/L | 56-60: 46-118 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12: 133-485 U/L | 61-65: 50-130 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13: 120-449 U/L | >65: 55-142 U/L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BUN | 5 to 25 mg/dL | <p>Males</p> <p>0-3 years: 5.1 to 16.8 mg/dL 4 to 13 years: 7.0 to 16.8 mg/dL 14-19 years: 8.4 to 21.0 mg/dL 20-50 years: 8.9 to 20.6 mg/dL >50 years: 8.4 to 25.7 mg/dL</p> <p>Females</p> <p>0-3 years: 5.1 to 16.8 mg/dL 4 to 13 years: 7.0 to 16.8 mg/dL 14-19 years: 8.4 to 21.0 mg/dL 20-50 years: 7.0 to 18.7 mg/dL >50 years: 9.8 to 20.1 mg/dL</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Calcium | <p>Males 1-14 years: 9.6 to 10.6 mg/dL 15-16 years: 9.5 to 10.5 mg/dL 17-18 years: 9.5 to 10.4 mg/dL 19-21 years: 9.3 to 10.3 mg/dL >22 years: 8.9 to 10.1 mg/dL</p> <p>Females 1-11 years: 9.6 to 10.6mg/dL 12-14 years: 9.5 to 10.4 mg/dL 15-18 years: 9.1 to 10.3 mg/dL >19 years: 8.9 to 10.1 mg/dL</p> <p>*Reference values have not been established for patients who are <12 months of age.</p> | <p>Males 0-9 days: 7.6 to 10.4 mg/dL 10 days-23 months: 9.0 to 11.0 mg/dL 2-12 years: 8.8 to 10.8 mg/dL 13 to 60 years 8.4 to 10.2 mg/dL >60 years: 8.8 to 10.0 mg/dL</p> <p>Females 0-9 days: 7.6 to 10.4 mg/dL 10 days-23 months: 9.0 to 11.0 mg/dL 2-12 years: 8.8 to 10.8 mg/dL >12 years 8.4 to 10.2 mg/dL</p> |
| Creatinine (Plasma/ Serum) | <p>Males 1-2 years: 0.1 to 0.4 mg/dL 3-4 years: 0.1 to 0.5 mg/dL 5-9 years: 0.2 to 0.6 mg/dL 10-11 years: 0.3 to 0.7 mg/dL 12-13 years: 0.4 to 0.8 mg/dL 14-15 years: 0.5 to 0.9 mg/dL 16 and up: 0.8 to 1.3 mg/dL</p> <p>Females 1-3 years: 0.1 to 0.4 mg/dL 4-5 years: 0.2 to 0.5 mg/dL 6-8 years: 0.3 to 0.6 mg/dL 9-15 years: 0.4 to 0.7 mg/dL 16 and up: 0.6 to 1.1 mg/dL</p> <p>*Reference values have not been established for patients who are <12 months of age.</p> | <p>Males 0-14 days: 0.42 to 1.05 mg/dL 15-364 days: 0.31 to 0.53 mg/dL 1-3 years: 0.39 to 0.55 mg/dL 4-6 years: 0.44 to 0.65 mg/dL 7-11 years: 0.52 to 0.69 mg/dL 12-14 years: 0.57 to 0.8 mg/dL 15-16 years: 0.65 to 1.04 mg/dL 17-18 years: 0.69 to 1.1 mg/dL >18 years: 0.72 to 1.25 mg/dL</p> <p>Females 0-14 days: 0.42 to 1.05 mg/dL 15-364 days: 0.31 to 0.53 mg/dL 1-3 years: 0.39 to 0.55 mg/dL 4-6 years: 0.44 to 0.65 mg/dL 7-11 years: 0.52 to 0.69 mg/dL 12-14 years: 0.57 to 0.8 mg/dL 15-16 years: 0.59 to 0.86 mg/dL 17-18 years: 0.6 to 0.88 mg/dL >18 years: 0.57 to 1.11 mg/dL</p> |
| Direct Bilirubin | <0.4 mg/dL | <p>Males 0-14 days: 0.3 to 0.7 mg/dL 15-364 days: 0.1 to 0.3 mg/dL 1-8 years: 0.1 to 0.2 mg/dL 9-12 years: 0.1 to 0.3 mg/dL 13-18 years: 0.1 to 0.4 mg/dL >18 years: 0.0 to 0.5</p> <p>Females 0-14 days: 0.3 to 0.7 mg/dL 15-364 days: 0.1 to 0.3 mg/dL 1-8 years: 0.1 to 0.2 mg/dL 9-12 years: 0.1 to 0.3 mg/dL 13-18 years: 0.1 to 0.4 mg/dL >18 years: 0.0 to 0.5</p> |
| Glucose | Fasting: 70 to 99 mg/dL | <p>Fasting: 70-99 mg/dL</p> <p>Comment: Postprandial: <180 mg/dL"</p> |

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| Magnesium | Male/Female 0 days: 1.5 to 2.2 mg/dL 5 months-5 years: 1.7 to 2.3 mg/dL 6-11 years: 1.7 to 2.1 mg/dL 12-19 years: 1.7 to 2.2 mg/dL >19 years: 1.6 to 2.6 mg/dL | Male/Female 0-2 years: 1.6 to 2.7 mg/dL 3-5 years: 1.6 to 2.6 mg/dL 6-8 years: 1.6 to 2.5 mg/dL 9-11 years: 1.6 to 2.4 mg/dL 12-20 years: 1.7 to 2.2 mg/dL >20 years: 1.6 to 2.6 mg/dL |
| Sodium | 135 to 145 mmol/L | Male/Female 0-364 days: 133 to 146 mmol/L > 1 year: 135 to 145 mmol/L |
| Total Protein | Adult, ambulatory: 6.4 to 8.3 g/dL | Adult, ambulatory: 6.4 to 8.3 g/dL Comment: Plasma values are generally 0.3 to 0.5 g/dL higher than serum values due to the presence of fibrinogen. Comment: Patients over 60 years of age have lower value by 0.2 g/dL. |
| Urine Protein | Random: 1 to 14 mg/dL | Random: 1 to 14 mg/dL Comment: 24 hour at rest: 50 to 80 mg/day Comment: Spot Urine Protein-to-Creatinine Ratio: <200 mg/g |
| HDL Ultra | Females: >49 mg/dL Males: >39 mg/dL | Males: > or = 40 mg/dL Females: > or = 50 mg/dL |