NOTICE OF NEW SERVICE

DATE: May 16, 2010

TO: Housestaff and PCN Physicians, Faculty, and Nursing Personnel

FROM: Sridevi Devaraj, Ph.D., DABCC, FACB
       Director of Toxicology and Special Chemistry

RE: BIOAVAILABLE TESTOSTERONE PANEL

Effective June 1, 2010, a Bioavailable Testosterone Panel, including SHBG, Free Testosterone (calculated), % Free Testosterone (%CFT), and albumin, will be performed in-house by the UCDHS Clinical Laboratory, Special Chemistry. The Bioavailable Testosterone panel can only be ordered on males ≥ 17 years old. In EMR this Bioavailable panel will appear as TESTOSTERONE, BIOAVAIL MALE >17.

Please note that Female and child Bioavailable Testosterone testing will continue to be sent out for the LC/MS testing. In EMR the sendout for Female and child Bioavailable Testosterone appears as TESTOSTERONE,BIOAVAIL FE/CHIL. SHBG testing by itself can be performed on children and adults; please refer to the SHBG blue sheet for this information.

The Bioavailable and Free Testosterone values are derived from mathematical formulas based on constants for the binding of Testosterone to Sex Hormone Binding Globulin and albumin. The UCDHS Total Testosterone and SHBG tests are chemiluminescent methods performed on the Siemens Immulite 2000 instrument. The albumin test will be performed in General chemistry on the Beckman LX analyzer.

Reference Interval for Males ≥ 17 years old

<table>
<thead>
<tr>
<th>TOTAL TESTOSTERONE</th>
<th>BIOAVAILABLE TESTOSTERONE</th>
<th>FREE TESTOSTERONE, calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs)</strong></td>
<td><strong>ng/dL</strong></td>
<td><strong>Age (yrs)</strong></td>
</tr>
<tr>
<td>17 - 19 yrs</td>
<td>260 - 980</td>
<td>17 - 40</td>
</tr>
<tr>
<td>20 - 49 yrs</td>
<td>262 - 1070</td>
<td>41 - 60</td>
</tr>
<tr>
<td>≥ 50 yrs</td>
<td>181 - 758</td>
<td>61 - 90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHBG</th>
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<tbody>
<tr>
<td><strong>Age (yrs)</strong></td>
</tr>
<tr>
<td>17 - 18 yrs</td>
</tr>
<tr>
<td>&gt; 18 yrs</td>
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</tbody>
</table>

Sample Requirement: PLEASE DRAW 2 TUBES: one 5-mL heparin (green) for the albumin and one full 5-mL Serum Separator (gold) or Serum (red) tube. (If a green top tube is already being drawn at the same time for other chemistries, then the albumin test for the Bioavailable Testosterone panel can be run on this same heparin tube.)

Routine Testing: Performed Monday, Wednesday, and Friday

If you have any questions, please contact Dr. Sridevi Devaraj 916-734-6594, or Teri Cook 916-734-0283.

APPROVED BY: Lydia P. Howell, MD
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