TEST CHANGE

Cobalt, Urine

0025032, COBALT U

Specimen Requirements:	
Patient Preparation:	Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and nonessential~~non-essential~~ over-the-counter medications (upon the advice of their physician). High concentrations of iodine may interfere with elemental testing. Collection from patients receiving iodinated or gadolinium-based contrast media must be avoided for a minimum of 72 hours post-exposure. Collection from patients with impaired kidney function should be avoided for a minimum of 14 days post contrast media exposure.
Collect:	24-hour urine~~ Hour Urine~~. Refrigerate during collection. Specimen must be collected in a plastic container. Also acceptable: Random u~~U~~rine.
Specimen Preparation:	Transfer an 8 mL aliquot from a well-mixed collection to ARUP Trace Element-Free Transport Tubes (ARUP supply #43116) available online through eSupply using ARUP Connect(TM) or contact ARUP Client Services at ~~(~~800-~~)~~ 522-2787. (Min: 1 mL)
Transport Temperature:	Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions:	Specimens collected within 72 hours after administration of iodinated or gadolinium-based contrast media. Acid preserved urine. Specimens transported in containers other than specified. Specimens contaminated with blood or fecal material.
Remarks:	Record total volume and collection time interval on transport tube and on test request form.
Stability:	Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 1 year
Methodology:	Quantitative Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)
Note:	
CPT Codes:	83018
New York DOH Approval Status:	This test is New York DOH approved.

Interpretive Data:

Urine cobalt~~Cobalt urine~~ levels can be used to monitor acute exposure as the reported half-life of cobalt is on the order of several days. Urine cobalt levels generally do not exceed 1.0 ug/L in the general population and are rarely used in the management of chronic exposure. Symptoms associated with cobalt toxicity vary based upon route of exposure and may include cardiomyopathy, allergic dermatitis, pulmonary fibrosis, cough and dyspnea.

Elevated results may be due to skin or collection-related contamination, including the use of collection containers that are not certified to be trace element-free. If an elevated result is suspected to be due to contamination, confirmation with a second specimen collected in a certified trace element-free container is recommended.

Methodology: Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)

Per 24h calculations are provided to aid interpretation for collections with a duration of 24 hours and an average daily urine volume. For specimens with notable deviations in collection time or volume, ratios of analytes to a corresponding urine creatinine concentration may assist in result interpretation.

~~This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.~~

Reference Interval:

<table>
<tr><th>Test Number</th><th>Components</th><th>Reference Interval</th></tr>
<tr><td></td><td>Cobalt, Urine - per 24h</td><td>Less than or equal to ~~0.0~~ 4.4 microg/d</td></tr>
<tr><td></td><td>Cobalt, Urine - per volume</td><td>Less than or equal to ~~0.0~~ 1.2 microg/L</td></tr>
<tr><td></td><td>Cobalt, Urine - ratio to CRT</td><td>Less than or equal to ~~0.0~~ 4.2 microg/g CRT</td></tr>
<tr><td></td><td>Creatinine, Urine - per 24h</td><td></td></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Age</th><th>Male (mg/d)</th><th>Female (mg/d)</th></tr>
<tr><td>3-8 years</td><td>140-700</td><td>140-700</td></tr>
<tr><td>9-12 years</td><td>300-1300</td><td>300-1300</td></tr>
<tr><td>13-17 years</td><td>500-2300</td><td>400-1600</td></tr>
<tr><td>18-50 years</td><td>1000-2500</td><td>700-1600</td></tr>
<tr><td>51-80 years</td><td>800-2100</td><td>500-1400</td></tr>
<tr><td>81 years and older</td><td>600-2000</td><td>400-1300</td></tr>
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