



EMH Reference Laboratory

VITAMIN D - 25(OH) TOTAL

Date: March 24, 2009

Subject: New In-House Vitamin D Test

The EMH Reference Laboratory is pleased to announce that effective March 31st, 2009 Vitamin D-25(OH) Total testing will be performed in-house.

Recent research suggests that vitamin D is not actually a vitamin, but a prohormone that plays an important role in regulating over 200 genes that assist in the prevention of disease. Furthermore, vitamin D insufficiency has been implicated in the development of cancer, viral infections, asthma, diabetes, hypertension, autoimmune diseases, tuberculosis, cardiovascular disease, autism, and other conditions. Unfortunately, this new knowledge has not translated into improved vitamin D status in the population. In fact, vitamin D insufficiency is highly prevalent across all age groups, geographic regions, and seasons.

The term ‘vitamin D’ usually refers collectively to two molecules, cholecalciferol (D₃) and ergocalciferol (D₂), which are similar in structure to that of classic steroid hormones. In humans, D₃ is made in skin cells exposed to UV-B light. D₂ is derived from plants. Both vitamin D₂ and D₃, from the diet or UV-B conversion, are converted by the liver to 25(OH)D (**25-hydroxyvitamin D**) which is the **functional indicator of vitamin D status**.

Studies also show that 25-hydroxyvitamin D measurements vary widely depending on the method used and/or the laboratory performing the test. After careful evaluation, we chose the FDA-approved DiaSorin Liason® Total-D™ assay, a chemiluminescence immunoassay method providing reliable measurement of circulating total (D₂ + D₃) 25(OH)D. DiaSorin has been the leader in Vitamin D analysis since producing the first assay in 1985. Over the past 2 decades, the DiaSorin method was used in the vast majority of clinical studies worldwide.

Understanding that a sufficient vitamin D level has a much greater impact on overall health than once thought, the optimal blood level of 25(OH)D has proved controversial. It has been recognized, however, that population-based reference values derived from apparently healthy individuals are usually too low. The best reference ranges are based on physiological insufficiency as defined by 25(OH)D levels below those where parathyroid levels increase in a population. Please refer to the table below for these reference ranges and other important test information.

Vitamin D Test Information

<i>Test Name</i>	<i>Method</i>	<i>Reference Values</i>	<i>Frequency</i>	<i>Analytic Time</i>	<i>Test Code</i>	<i>CPT</i>
Vitamin D, 25 OH Total	Chemiluminescent Immunoassay	Severely deficient <10 ng/mL Insufficient 10-29.9 ng/mL Optimal 30-100 ng/mL Potentially toxic >100 ng/mL	Mon, Wed, Fri	4 hrs	VITD	82306
Specimen Requirements	Collect 1 SST (0.5 ml serum per test). Invert tube 8-10 times to mix. Clot, spin, and refrigerate within 2 hours. Stable 5 days refrigerated, > 5 days frozen.					

To obtain additional information or references regarding this announcement, please call Client Services toll-free at 866-941-4542.

jmh Mar-09

