



MEMORANDUM #95

TO: UNC Hospitals Attending Physicians, Housestaff, Department Heads, Nursing staff and Supervisors

FROM: *CHS* Catherine Hammett-Stabler, Ph.D., Director, Core Laboratory
RJM Robert Mills, MT (ASCP), Supervisor, Core Laboratory
HW Herbert C. Whinna, M.D., Ph.D. Director, McLendon Clinical Laboratories

DATE: January 21, 2011

SUBJECT: **Vitamin D Testing**

The Core laboratory announces the introduction of in-house testing for Vitamin D using ultra performance liquid chromatography – mass spectrometry. This method allows the separation and quantification of 25(OH)D₂ and 25(OH)D₃. Total 25(OH) Vitamin D is derived as a sum of the two. Samples for this testing have previously been sent to Mayo Medical Laboratories.

Clinical Significance: Vitamin D, found as Vitamin D₂ (ergocalciferol) and Vitamin D₃ (cholecalciferol), is a group of fat-soluble prohormones involved in calcium homeostasis. Vitamin D₂ is found in some plants and is produced commercially by irradiation of yeast. Vitamin D₃ is produced in the skin in response to ultraviolet B radiation from sunlight. It is also found in foods such as liver, egg yolks, and some fish. Both Vitamin D₂ and Vitamin D₃ are available in supplement forms. Both forms are metabolized in the liver to 25(OH)D which is subsequently converted in the kidney to the biologically active form 1,25(OH)₂D.

Vitamin D deficiency is characterized by impaired bone mineralization and is associated with rickets, osteoporosis, and osteomalacia. Several recent studies have shown that Vitamin D deficiency may play a role in many other diseases as well.

Assessment of Vitamin D status is determined by measuring the prohormone 25(OH) Vitamin D which indicates supply and has a half-life of ~3 weeks.

Ordering Information: Test ID – 25OHD Test Number - 1360 CPT Code – 82306

Specimen Requirements: 4 mL of blood/Serum Separator Tube/Gold Top, or
1 mL blood/ 2 microtainers.

Availability: Testing will be performed Monday through Friday. STAT testing is not available.

Reference Range and Interpretation:

<10 ng/mL	Deficiency
10-24 ng/mL	Moderate to mild deficiency
25-80 ng/mL	Considered optimal for most patients
>80 ng/mL	Elevated level (possible toxicity)

For questions or more information regarding this test, please contact Dr. Hammett-Stabler or Robert Mills at 966-2361.