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CID : 2212901040
Name : MRS.PRIYAL AGRAWAL
Age / Gender : 31 Years / Female
Consulting Dr. : -
Reg. Location : Pimple Saudagar, Pune (Main Centre)

Collected : 09-May-2022 / 10:46
Reported : 09-May-2022 / 19:48

VITAMIN B12

<u>PARAMETER</u>	<u>RESULTS</u>	<u>BIOLOGICAL REF RANGE</u>	<u>METHOD</u>
VITAMIN B12, Serum	334.0	187-883 pg/ml	CMIA

Kindly note change in Reference Range w.e.f. 25/05/2019

Intended Use:

- Vitamin B12 is also referred to as cyanocobalamin/cobalmin.
- It is essential in DNA synthesis, haematopoiesis & CNS integrity.
- It cannot be synthesized in the human body & is seldom found in products of plant origin.
- The absorption of Vit B12 depends on the presence of Intrinsic factor (IF) & may be due to lack of IF secretion by the gastric mucosa (e.g. gastrectomy, gastric atrophy) or intestinal malabsorption (e.g. ileal resection, small intestinal diseases).
- Dietary Sources of vitamin B12 are meat, fish, eggs & dairy products.

Clinical Significance:

- Vitamin B12 or folate are both of diagnostic importance for the recognition of vitamin B12 or folate deficiency, especially in the context of the differential diagnosis of megaloblastic anemia.
- Untreated deficiencies will lead to megaloblastic anemia, irreversible central nervous system degeneration, peripheral neuropathies, dementia, poor cognitive performance & depression.

Interpretation:

Increased In- Vit B12 supplements, chronic granulocytic leukemia, COPD, Chronic renal failure, diabetes, leucocytosis, hepatitis, cirrhosis, obesity, polycythemia vera, protein malnutrition, severe CHF, uremia, Vit A intake, estrogens, drugs such as chloral hydrate.
Decreased In- Inflammatory bowel disease, pernicious anaemia, strict vegetarians, malabsorption due to gastrectomy, smoking, pregnancy, multiple myeloma & haemodialysis. Alcohol & drugs like aminosalicylic acid, anticonvulsants, cholestyramine, cimetidine, colchicine, metformin, neomycin, oral contraceptives, ranitidine & triamterine also cause a decrease in Vit B12 levels.

Reflex Tests: Active B12 (holotranscobalamin), Folate, Homocysteine, Methylmalonic acid (MMA) and Intrinsic factor antibody & parietal cell antibody.

Limitations: Patients on high dose biotin therapy should not get tested for vitamin B12.

*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD Pune Lab, Pune Swargate

*** End Of Report ***



MC-2463

Shamla Kulkarni

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VITAMIN D TOTAL (25-OH VITAMIN D)

<u>PARAMETER</u>	<u>RESULTS</u>	<u>BIOLOGICAL REF RANGE</u>	<u>METHOD</u>
25-hydroxy Vitamin D, Serum	32.0	Deficiency: < 10 ng/ml Insufficiency: 10 - 30 ng/ml Sufficiency: 30 - 100 ng/ml Toxicity: > 100 ng/ml	CMIA

Intended Use:

- Diagnosis of vitamin D deficiency
- Differential diagnosis of causes of rickets and osteomalacia
- Monitoring vitamin D replacement therapy
- Diagnosis of hypervitaminosis D

Clinical Significance: Vitamin D is a steroid hormone known for its important role in regulating body levels of calcium and phosphorus and in the mineralization of bone. Measured 25-OH vitamin D includes D3 (Cholecalciferol) and D2 (Ergocalciferol) where D2 is absorbed from food and D3 is produced by the skin on exposure to sunlight. The major storage form of vitamin D is 25-OH vitamin D and is present in the blood at up to 1,000 fold higher concentration compared to the active 1,25-OH vitamin D; and has a longer half life making it an analyte of choice for determination of the vitamin D status.

Interpretation:

Increased In- D intoxication & Excessive exposure to sunlight

Decreased In: Lack of sunlight, Steatorrhea, Biliary and Portal cirrhosis, Pancreatic insufficiency, Inflammatory bowel disease, Alzheimer's disease, Malabsorption, Thyrotoxicosis, Dietary osteomalacia, Anticonvulsant osteomalacia, Celiac disease and Rickets

Reflex Tests: Serum Calcium, PTH and BMD

Limitation:

- For diagnostic purposes, results should be used in conjunction with other data; e.g. symptoms, results of other tests, clinical impressions, etc.
- Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with in vitro immunoassays. Patients routinely exposed to animals or to animal serum products can be prone to this interference and anomalous values may be observed.
- Specimens from patients who have received preparations of mouse monoclonal antibodies for diagnosis or therapy may contain human anti-mouse antibodies (HAMA). Specimens containing HAMA may produce anomalous values when tested with assay kits that employ mouse monoclonal antibodies.
- Various methods for measuring vitamin D are available but correlate with significant differences.
- Samples should not be taken from patients receiving therapy with high biotin doses (i.e. >5 mg/day) until at least 8 hrs following the last biotin administration.

*Sample processed at SUBURBAN DIAGNOSTICS (INDIA) PVT. LTD Pune Lab, Pune Swargate

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