



NAME : Mrs. MONIKA AGE/ GENDER : 35 YRS/FEMALE PATIENT ID : 1735578 COLLECTED BY : REG. NO./LAB NO. : 012501260001 REFERRED BY : REGISTRATION DATE : 26/Jan/2025 07:26 AM BARCODE NO. : 01524432 COLLECTION DATE : 26/Jan/2025 07:28 AM CLIENT CODE. : KOS DIAGNOSTIC LAB REPORTING DATE : 26/Jan/2025 07:28 AM CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT : 26/Jan/2025 11:28 AM CENDOCRINOLOGY THYROID FUNCTION TEST: TOTAL TRIIODOTHYRONINE (T3): SERUM 0.958 ng/mL 0.35 - 1.93 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY) 9.21 µgm/dL 4.87 - 12.60 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY) 9.21 µgm/dL 4.87 - 12.60 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY) 5.926 ^H µlU/mL 0.35 - 5.50 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY) 5.926 ^H µlU/mL 0.35 - 5.50 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY) 5.926 ^H µlU/mL 0.35 - 5.50 by CMM (CHEMILUMINESCENT MIGROPARTICLE IMMUNOASSAY)		Dr. Vinay Cho MD (Pathology & I Chairman & Const	Microbiology)	Dr. Yugam Chopra MD (Pathology) CEO & Consultant Pathologist		
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THYROXINE (T4): SERUM 9.21 μgm/dL 4.87 - 12.60 by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY) 5.926 ^H μIU/mL 0.35 - 5.50 THYROID STIMULATING HORMONE (TSH): SERUM 5.926 ^H μIU/mL 0.35 - 5.50 by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY) 5.926 ^H μIU/mL 0.35 - 5.50 3rd GENERATION, ULTRASENSITIVE Interpretation Interpretation Frequencies Frequencies TSH levels are subject to circadian variation, reaching peak levels between 2-4 a.m and at a minimum between 6-10 pm. The variation is of the order of 50%. Hence day has influence on the measured serum TSH concentrations. TSH stimulates the production and secretion of the metabolically active hormones, thyroxine (T4 triidothyronine (T3).Failure at any level of regulation of the hypothalamic-pituitary-thyroid axis will result in either underproduction (hypothyroidism) or overproduction(hyperthyroidism) of T4 and/or T3. T4 TSH CLINICAL CONDITION T3 T4 TSH Primary Hypothyroidism: Reduced Reduced Increased (Significantly)		IE (T3): SERUM	0.958		0.35 - 1.93	
THYROID STIMULATING HORMONE (TSH): SERUM by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY) 5.926 ^H μIU/mL 0.35 - 5.50 3rd GENERATION, ULTRASENSITIVE INTERPRETATION: Image: Comparison of the content of the hypothalamic-pituitary-thyroid axis will result in either underproduction (hypothyroidism) of T4 and/or T3. Clinical Condition T3 T4 TSH Primary Hypothyroidism: Reduced Increased (Significantly)	by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASS THYROXINE (T4): SERUM		9.21	C	4.87 - 12.60	
INTERPRETATION:TSH levels are subject to circadian variation, reaching peak levels between 2-4 a.m and at a minimum between 6-10 pm. The variation is of the order of 50%. Hence day has influence on the measured serum TSH concentrations. TSH stimulates the production and secretion of the metabolically active hormones, thyroxine (T4 riodothyronine (T3).Failure at any level of regulation of the hypothalamic-pituitary-thyroid axis will result in either underproduction (hypothyroidism) or overproduction(hyperthyroidism) of T4 and/or T3.CLINICAL CONDITIONT3T4TSHPrimary Hypothyroidism:ReducedReducedIncreased (Significantly)	THYROID STIMULA	TING HORMONE (TSH): SERUM	4 5.926 ^H	µIU/mL	0.35 - 5.50	
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Primary Hypothyroidism: Reduced Reduced Increased (Significantly)	day has influence on the r triiodothyronine (T3).Fail	neasured serum TSH concentrations. TSH ure at any level of regulation of the hyp	stimulates the productio	n and secretion of the m	etabolically active hormones, thyre	oxine (T4)and
	CLINICAL CONDITION	T3	T4		TSH	
Subclinical Hypothyroidism: Normal or Low Normal Normal or Low Normal High	5 51 5					
	51 5		ormal Normal		0	
Primary Hyperthyroidism: Increased Reduced (at times undetectable) Subclinical Hyperthyroidism: Normal or High Normal Normal or High Normal Reduced					,	

LIMITATIONS:-

1. T3 and T4 circulates in reversibly bound form with Thyroid binding globulins (TBG), and to a lesser extent albumin and Thyroid binding Pre Albumin so conditions in which TBG and protein levels alter such as pregnancy, excess estrogens, androgens, anabolic steroids and glucocorticoids may falsely affect the T3 and T4 levels and may cause false thyroid values for thyroid function tests.

2. Normal levels of T4 can also be seen in Hyperthyroid patients with :T3 Thyrotoxicosis, Decreased binding capacity due to hypoproteinemia or ingestion of certain drugs (e.g.: phenytoin , salicylates).

3. Serum T4 levels in neonates and infants are higher than values in the normal adult , due to the increased concentration of TBG in neonate serum.

4. TSH may be normal in central hypothyroidism , recent rapid correction of hyperthyroidism or hypothyroidism , pregnancy , phenytoin therapy.

TRIIODOTHYRONINE (T3)		THYROXINE (T4)		THYROID STIMULATING HORMONE (TSH)		
Age	Refferance Range (ng/mL)	Age	Refferance Range (µg/dL)	Age	Reference Range (μIU/mL)	
0 - 7 Days	0.20 - 2.65	0 - 7 Days	5.90 - 18.58	0 - 7 Days	2.43 - 24.3	
7 Days - 3 Months	0.36 - 2.59	7 Days - 3 Months	6.39 - 17.66	7 Days - 3 Months	0.58 - 11.00	
3 - 6 Months	0.51 - 2.52	3 - 6 Months	6.75 - 17.04	3 Days – 6 Months	0.70 - 8.40	
6 - 12 Months	0.74 - 2.40	6 - 12 Months	7.10 - 16.16	6 – 12 Months	0.70 - 7.00	





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	Dr. Vinay Chopra MD (Pathology & Microbiology Chairman & Consultant Pathol		(Pathology)
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Test Name		Value	Unit	t	Biological Reference interval	
1 - 10 Years	0.92 - 2.28	1 - 10 Years	6.00 - 13.80	1 – 10 Years	0.60 - 5.50	
11- 19 Years	0.35 - 1.93	11 - 19 Years	4.87-13.20	11 – 19 Years	0.50 - 5.50	
> 20 years (Adults)	0.35 - 1.93	> 20 Years (Adults)	4.87 - 12.60	> 20 Years (Adults)	0.35-5.50	
	RECON	IMENDATIONS OF TSH LE	EVELS DURING PRE	GNANCY (µIU/mL)		
	1st Trimester			0.10 - 2.50		
	2nd Trimester			0.20 - 3.00		
	3rd Trimester			0.30 - 4.10		

INCREASED TSH LEVELS:

1. Primary or untreated hypothyroidism may vary from 3 times to more than 100 times normal depending upon degree of hypofunction.

2. Hypothyroid patients receiving insufficient thyroid replacement therapy.

3. Hashimotos thyroiditis

4.DRUGS: Amphetamines, iodine containing agents & dopamine antagonist.

5.Neonatal period, increase in 1st 2-3 days of life due to post-natal surge

DECREASED TSH LEVELS:

1.Toxic multi-nodular goiter & Thyroiditis.

2. Over replacement of thyroid hormone in treatment of hypothyroidism.

3. Autonomously functioning Thyroid adenoma

4. Secondary pituitary or hypothalamic hypothyroidism

5. Acute psychiatric illness

6.Severe dehydration.

7.DRUGS: Glucocorticoids, Dopamine, Levodopa, T4 replacement therapy, Anti-thyroid drugs for thyrotoxicosis.

8.Pregnancy: 1st and 2nd Trimester

*** End Of Report ***





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