

**Dr. Vinay Chopra**  
 MD (Pathology & Microbiology)  
 Chairman & Consultant Pathologist

**Dr. Yugam Chopra**  
 MD (Pathology)  
 CEO & Consultant Pathologist

<b>NAME</b>	: Mr. JASWANT SINGH	<b>PATIENT ID</b>	: 1627907
<b>AGE/ GENDER</b>	: 78 YRS/MALE	<b>REG. NO./LAB NO.</b>	: <b>012409280031</b>
<b>COLLECTED BY</b>	: SURJESH	<b>REGISTRATION DATE</b>	: 28/Sep/2024 11:31 AM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 28/Sep/2024 11:36AM
<b>BARCODE NO.</b>	: 01517875	<b>REPORTING DATE</b>	: 28/Sep/2024 11:49AM
<b>CLIENT CODE.</b>	: KOS DIAGNOSTIC LAB		
<b>CLIENT ADDRESS</b>	: 6349/1, NICHOLSON ROAD, AMBALA CANTT		

Test Name	Value	Unit	Biological Reference interval
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**HAEMATOLOGY**

**HAEMOGLOBIN (HB)**

HAEMOGLOBIN (HB)	13.9	gm/dL	12.0 - 17.0
<i>by CALORIMETRIC</i>			

**INTERPRETATION:-**

Hemoglobin is the protein molecule in red blood cells that carries oxygen from the lungs to the body's tissues and returns carbon dioxide from the tissues back to the lungs.

A low hemoglobin level is referred to as ANEMIA or low red blood count.

**ANEMIA ( DECREASED HAEMOGLOBIN):**


- 1) Loss of blood (traumatic injury, surgery, bleeding, colon cancer or stomach ulcer)
- 2) Nutritional deficiency (iron, vitamin B12, folate)
- 3) Bone marrow problems (replacement of bone marrow by cancer)
- 4) Suppression by red blood cell synthesis by chemotherapy drugs
- 5) Kidney failure
- 6) Abnormal hemoglobin structure (sickle cell anemia or thalassemia).


**POLYCYTHEMIA (INCREASED HAEMOGLOBIN):**

- 1) People in higher altitudes (Physiological)
- 2) Smoking (Secondary Polycythemia)
- 3) Dehydration produces a falsely rise in hemoglobin due to increased haemoconcentration
- 4) Advanced lung disease (for example, emphysema)
- 5) Certain tumors
- 6) A disorder of the bone marrow known as polycythemia rubra vera,
- 7) Abuse of the drug erythropoetin (Epogen) by athletes for blood doping purposes (increasing the amount of oxygen available to the body by chemically raising the production of red blood cells).

**NOTE: TEST CONDUCTED ON EDTA WHOLE BLOOD**



  
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**CLINICAL CHEMISTRY/BIOCHEMISTRY**

**GLUCOSE POST PRANDIAL (PP)**

<b>GLUCOSE POST PRANDIAL (PP): PLASMA</b> <i>by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)</i>	392.2 <sup>H</sup>	mg/dL	<b>NORMAL: &lt; 140.00</b> <b>PREDIABETIC: 140.0 - 200.0</b> <b>DIABETIC: &gt; OR = 200.0</b>
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**INTERPRETATION**

**IN ACCORDANCE WITH AMERICAN DIABETES ASSOCIATION GUIDELINES:**

1. A post-prandial plasma glucose level below 140 mg/dl is considered normal.
2. A post-prandial glucose level between 140 - 200 mg/dl is considered as glucose intolerant or prediabetic. A fasting and post-prandial blood test (after consumption of 75 gms of glucose) is recommended for all such patients.
3. A post-prandial plasma glucose level of above 200 mg/dl is highly suggestive of diabetic state. A repeat post-prandial is strongly recommended for all such patients. A fasting plasma glucose level in excess of 125 mg/dl on both occasions is confirmatory for diabetic state.



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Test Name	Value	Unit	Biological Reference interval
<b>CHOLESTEROL: SERUM</b>			
CHOLESTEROL TOTAL: SERUM <i>by CHOLESTEROL OXIDASE PAP</i>	147.89	mg/dL	OPTIMAL: < 200.0 BORDERLINE HIGH: 200.0 - 239.0 HIGH CHOLESTEROL: > OR = 240.0

**INTERPRETATION:**

NATIONAL LIPID ASSOCIATION RECOMMENDATIONS (NLA-2014)	CHOLESTEROL IN ADULTS (mg/dL)	CHOLESTEROL IN ADULTS (mg/dL)
DESIRABLE	< 200.0	< 170.0
BORDERLINE HIGH	200.0 – 239.0	171.0 – 199.0
HIGH	>= 240.0	>= 200.0

**NOTE:**

- Measurements in the same patient can show physiological & analytical variations. Three serial samples 1 week apart are recommended for Total Cholesterol, Triglycerides, HDL & LDL Cholesterol.
- As per National Lipid association - 2014 guidelines, all adults above the age of 20 years should be screened for lipid status. Selective screening of children above the age of 2 years with a family history of premature cardiovascular disease or those with at least one parent with high total cholesterol is recommended.



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Test Name	Value	Unit	Biological Reference interval
<b>UREA: SERUM</b> by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)	119.42 <sup>H</sup>	mg/dL	10.00 - 50.00

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Test Name	Value	Unit	Biological Reference interval
<b>CREATININE</b>			
CREATININE: SERUM by ENZYMATIC, SPECTROPHOTOMETRY	2.49 <sup>H</sup>	mg/dL	0.40 - 1.40

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**CALCIUM**

CALCIUM: SERUM	9.48	mg/dL	8.50 - 10.60
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by ARSENAZO III, SPECTROPHOTOMETRY

**INTERPRETATION:-**

1. Serum calcium (total) estimation is used for the diagnosis and monitoring of a wide range of disorders including diseases of bone, kidney, parathyroid gland, or gastrointestinal tract.
2. Calcium levels may also reflect abnormal vitamin D or protein levels.
3. The calcium content of an adult is somewhat over 1 kg (about 2% of the body weight). Of this, 99% is present as calcium hydroxyapatite in bones and <1% is present in the extra-osseous intracellular space or extracellular space (ECS).
4. In serum, calcium is bound to a considerable extent to proteins (approximately 40%), 10% is in the form of inorganic complexes, and 50% is present as free or ionized calcium.

**NOTE:-**Calcium ions affect the contractility of the heart and the skeletal musculature, and are essential for the function of the nervous system. In addition, calcium ions play an important role in blood clotting and bone mineralization.

**HYPOCALCEMIA (LOW CALCIUM LEVELS) CAUSES :-**

1. Due to the absence or impaired function of the parathyroid glands or impaired vitamin-D synthesis.
2. Chronic renal failure is also frequently associated with hypocalcemia due to decreased vitamin-D synthesis as well as hyperphosphatemia and skeletal resistance to the action of parathyroid hormone (PTH).
3. **NOTE:-** A characteristic symptom of hypocalcemia is latent or manifest tetany and osteomalacia.

**HYPERCALCEMIA (INCREASE CALCIUM LEVELS) CAUSES:-**

1. Increased mobilization of calcium from the skeletal system or increased intestinal absorption.
2. Primary hyperparathyroidism (pHPT)
3. Bone metastasis of carcinoma of the breast, prostate, thyroid gland, or lung.

**NOTE:-**Severe hypercalcemia may result in cardiac arrhythmia.

\*\*\* End Of Report \*\*\*



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