

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

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

NAME : Mr. JASKARAN
AGE/ GENDER : 20 YRS/MALE
COLLECTED BY :
REFERRED BY :
BARCODE NO. : 01522557
CLIENT CODE. : KOS DIAGNOSTIC LAB
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1701208
REG. NO./LAB NO. : 012412170010
REGISTRATION DATE : 17/Dec/2024 08:59 AM
COLLECTION DATE : 17/Dec/2024 05:18PM
REPORTING DATE : 17/Dec/2024 11:47AM

Test Name	Value	Unit	Biological Reference interval
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CLINICAL CHEMISTRY/BIOCHEMISTRY

UREA

UREA: SERUM by UREASE - GLUTAMATE DEHYDROGENASE (GLDH)	37.2	mg/dL	10.00 - 50.00
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CREATININE

CREATININE: SERUM by ENZYMATIC, SPECTROPHOTOMETRY	1.11	mg/dL	0.40 - 1.40
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ELECTROLYTES PROFILE: SODIUM AND POTASSIUM

SODIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	147.5	mmol/L	135.0 - 150.0
POTASSIUM: SERUM <i>by ISE (ION SELECTIVE ELECTRODE)</i>	4.67	mmol/L	3.50 - 5.00

INTERPRETATION:-

SODIUM:-

Sodium is the major cation of extra-cellular fluid. Its primary function in the body is to chemically maintain osmotic pressure & acid base balance & to transmit nerve impulse.

HYPONATREMIA (LOW SODIUM LEVEL) CAUSES:-

1. Low sodium intake.
2. Sodium loss due to diarrhea & vomiting with adequate water and inadequate salt replacement.
3. Diuretics abuses.
4. Salt loosing nephropathy.
5. Metabolic acidosis.
6. Adrenocortical insufficiency .
7. Hepatic failure.

HYPERNATREMIA (INCREASED SODIUM LEVEL) CAUSES:-

1. Hyperapnea (Prolonged)
2. Diabetes insipidus
3. Diabetic acidosis
4. Cushing's syndrome
5. Dehydration

POTASSIUM:-

Potassium is the major cation in the intracellular fluid. 90% of potassium is concentrated within the cells. When cells are damaged, potassium is released in the blood.


HYPOKALEMIA (LOW POTASSIUM LEVELS):-


1. Diarrhoea, vomiting & malabsorption.
2. Severe Burns.
3. Increased Secretions of Aldosterone

HYPERKALEMIA (INCREASED POTASSIUM LEVELS):-

1. Oliguria
2. Renal failure or Shock
3. Respiratory acidosis
4. Hemolysis of blood




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ENDOCRINOLOGY

CORTISOL: EVENING (4 P.M. - 6 P.M.)

CORTISOL EVENING (4 P.M. - 6 P.M.) by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)	5.959^L	ng/mL	20.2 - 131.0
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INTERPRETATION:

1.A cortisol test is done to measure the level of the hormone cortisol in the blood. The cortisol level may show problems with the adrenal glands or pituitary gland. Cortisol is made by the adrenal glands .

2.Cortisol levels go up when the pituitary gland releases another hormone called adrenocorticotrophic hormone (ACTH).

3.Most cortisol in the blood is bound to a protein; only a small percentage is "free" and biologically active. Blood cortisol testing evaluates both protein-bound and free cortisol while urine and saliva testing evaluate only free cortisol, which should correlate with the levels of free cortisol in the blood. Multiple blood and/or saliva cortisol levels collected at different times, such as at 8 am and 4 pm, can be used to evaluate both cortisol levels and diurnal variation. A 24-hour urine cortisol sample will not show diurnal variation; it will measure the total amount of unbound cortisol excreted in 24 hours.


CORTISOL FUNCTIONS:


- 1.It helps the body use sugar (glucose) and fat for energy (metabolism), and it helps the body manage stress.
- 2.Bone growth
- 3.Blood pressure control
- 4.Immune system function
- 5.Metabolism of fats, carbohydrates, and protein
- 6.Nervous system function
- 7.Stress response

THINGS TO KNOW ABOUT CORTISOL MEASUREMENT:

- 1.An increased or normal cortisol level just after waking along with a level that does not drop by bedtime suggests excess cortisol and Cushing syndrome. If this excess cortisol is not suppressed after an overnight dexamethasone suppression test, or if the 24-hour urine cortisol is elevated, or if the late-night salivary cortisol level is elevated, it suggests that the excess cortisol is due to abnormal increased ACTH production by the pituitary or a tumor outside of the pituitary or abnormal production by the adrenal glands. Additional testing will help to determine the exact cause.
- 2.If insufficient cortisol is present and the person tested responds to an ACTH stimulation test, then the problem is likely due to insufficient ACTH production by the pituitary. If the person does not respond to the ACTH stimulation test, then it is more likely that the problem is based in the adrenal glands. If the adrenal glands are underactive, due to pituitary dysfunction and/or insufficient ACTH production, then the person is said to have secondary adrenal insufficiency. If decreased cortisol production is due to adrenal damage, then the person is said to have primary adrenal insufficiency or Addison disease.
- 3.Once an abnormality has been identified and associated with the pituitary gland, adrenal glands, or other cause, then the health practitioner may use other testing such as CT (computerized tomography) or MRI (magnetic resonance imaging) scans to locate the source of the excess (such




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as a pituitary, adrenal, or other tumor) and to evaluate the extent of any damage to the glands.

4. Similar to those with adrenal insufficiency, people with a condition called congenital adrenal hyperplasia (CAH) have low cortisol levels and do not respond to ACTH stimulation tests. Cortisol measurement is one of many tests that may be used to help evaluate a person for CAH.

5. Heat, cold, infection, trauma, exercise, obesity, and debilitating disease can influence cortisol concentrations. Pregnancy, physical and emotional stress, and illness can increase cortisol levels. Cortisol levels may also increase as a result of hyperthyroidism or obesity. A number of drugs can also increase levels, particularly oral contraceptives (birth control pills), hydrocortisone (the synthetic form of cortisol), and spironolactone.

6. Adults have slightly higher cortisol levels than children do.

7. Hypothyroidism may decrease cortisol levels. Drugs that may decrease levels include some steroid hormones.


8. Salivary cortisol testing is being used more frequently to help diagnose Cushing syndrome and stress-related disorders but still requires specialized expertise to perform.

NOTE:

1. Normally, cortisol levels rise during the early morning hours and are highest about 7 a.m. They drop very low in the evening and during the early phase of sleep. But if you sleep during the day and are up at night, this pattern may be reversed. If you do not have this daily change (diurnal rhythm) in cortisol levels, you may have overactive adrenal glands. This condition is called Cushing's syndrome.

2. The timing of the cortisol test is very important because of the way cortisol levels vary throughout a day. If your doctor thinks you might make too much cortisol, the test will probably be done late in the day. If your doctor thinks you may not be making enough, a test is usually done in the morning.




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CORTISOL: MORNING (8 A.M. - 10 A.M.)

CORTISOL MORNING (8 A.M. - 10 A.M.) by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)	13.296	µg/dL	4.26 - 24.85
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INTERPRETATION:

1. A cortisol test is done to measure the level of the hormone cortisol in the blood. The cortisol level may show problems with the adrenal glands or pituitary gland. Cortisol is made by the adrenal glands.
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*** End Of Report ***




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