



# P K R JAIN HEALTHCARE INSTITUTE

NASIRPUR, Hissar Road, AMBALA CITY- (Haryana)

**A PIONEER DIAGNOSTIC CENTRE**

☎ 0171-2532620, 8222896961 ✉ pkrjainhealthcare@gmail.com

TEST PERFORMED AT KOS DIAGNOSTIC LAB, AMBALA CANTT.

<b>NAME</b>	: Miss. APARNA	<b>PATIENT ID</b>	: 1749597
<b>AGE/ GENDER</b>	: 20 YRS/FEMALE	<b>REG. NO./LAB NO.</b>	: 122502080011
<b>COLLECTED BY</b>	:	<b>REGISTRATION DATE</b>	: 08/Feb/2025 10:28 AM
<b>REFERRED BY</b>	:	<b>COLLECTION DATE</b>	: 08/Feb/2025 12:33PM
<b>BARCODE NO.</b>	: 12506899	<b>REPORTING DATE</b>	: 08/Feb/2025 02:32PM
<b>CLIENT CODE.</b>	: P.K.R JAIN HEALTHCARE INSTITUTE		
<b>CLIENT ADDRESS</b>	: NASIRPUR, HISSAR ROAD, AMBALA CITY - HARYANA		

Test Name	Value	Unit	Biological Reference interval
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## CLINICAL CHEMISTRY/BIOCHEMISTRY

### GLUCOSE FASTING (F)

GLUCOSE FASTING (F): PLASMA  
by GLUCOSE OXIDASE - PEROXIDASE (GOD-POD)

**103.18<sup>H</sup>** mg/dL

NORMAL: < 100.0  
PREDIABETIC: 100.0 - 125.0  
DIABETIC: > OR = 126.0

#### INTERPRETATION

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

1. A fasting plasma glucose level below 100 mg/dl is considered normal.
2. A fasting plasma glucose level between 100 - 125 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 fasting plasma glucose level of above 125 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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<b>BARCODE NO.</b>	: 12506899	<b>REPORTING DATE</b>	: 08/Feb/2025 07:19PM
<b>CLIENT CODE.</b>	: P.K.R JAIN HEALTHCARE INSTITUTE		
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## ENDOCRINOLOGY

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

CORTISOL MORNING (8 A.M. - 10 A.M.)  
by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)

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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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## INSULIN FASTING (F)

INSULIN FASTING (F) by CLIA (CHEMILUMINESCENCE IMMUNOASSAY)	19.013	μIU/ml	2.0 - 25.0
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### INTERPRETATION:-

1. Insulin is a hormone produced by the beta cells of the pancreas. It regulates the uptake and utilization of glucose and is also involved in protein synthesis and triglyceride storage.
2. Type 1 diabetes (insulin-dependent diabetes) is caused by insulin deficiency due to destruction of insulin producing pancreatic islets (beta) cells.
3. Type 2 diabetes (noninsulin dependent diabetes) is characterized by resistance to the action of insulin (insulin resistance).
4. The test is useful for management of diabetes mellitus and for diagnoses of insulinomas, when used in conjunction with proinsulin and C-peptide measurements.

### NOTE:

1. No standard reference range has yet been established for INSULIN POST-PRANDIAL (PP) in Indian population, therefore same could not be provided along with test. However various studies done on several populations mention that the range of INSULIN PP can vary somewhere from 5-79 mIU/L which can be used for clinical purpose.

2. This assay has 100% cross-reactivity with recombinant human insulin (Novolin R and Novolin N). It does not recognize other commonly used analogues of injectable insulin (ie, insulin lispro, insulin aspart, and insulin glargine).


### INTERPRETATIVE GUIDE:

1. During prolonged fasting, when the patient's glucose level is reduced to <40 mg/dL, elevated insulin level plus elevated levels of proinsulin and C-peptide suggest insulinoma.
2. Insulin levels generally decline in patients with type 1 diabetes mellitus.
3. In the early stage of type 2 diabetes, insulin levels are either normal or elevated. In the late stage of type 2 diabetes, insulin levels decline.
4. In normal individuals, insulin levels parallel blood glucose levels.
5. Patients on insulin therapy may develop anti-insulin antibodies. These antibodies may interfere in the assay system, causing inaccurate results. In such individuals, measurement of free insulin FINS / Insulin, Free, Serum should be performed.

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



  
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