



Olivhealth,PathLab:Plot No.-02, Awadhपुरi,  
Kanpur Nagar,Kanpur-208017  
Ph.: 0512-2580111, Mob: +91 9005125801

NAME Of Patient : **Mrs. PRITI BHASKAR**  
Age/Gender : 35 Yrs/Female  
Collected At : UP/Kanpur  
Panel Name : HEALTH SCAN- KNP  
Panel Address : PANKI STATION-  
Sample Type : Serum - 31101262

Test Request ID : 0122404240080  
Specimen Drawn On : 25-Apr-2024 05:51AM  
Specimen Received On : 25-Apr-2024 05:51AM  
Report Date : 25-Apr-2024 07:18AM  
Referred Lab : N/A  
Referred BY : NA

## IMMUNOASSAY

### Test Description

### Observed Value

### Biological Reference Range

#### Prolactin

Chemiluminescence

6.27

Non Pregnant Female : 2.8 - 29.2  
Pregnant : 9.7 - 208.5  
Post Menopausal : 1.8 - 20.3 ng/ml

#### Comments:

Prolactin (PRL) also known as lactotrope, is a protein encoded by PRL gene in human. Prolactin is a peptide hormone discovered by Oscar Riddle and important later work was done by Henry Friesen. Although it is perhaps best known for its role in lactation, prolactin already existed in the oldest known vertebrates - fish - where it's most important functions were probably related to control of water and salt balance. Prolactin also acts in a cytokine-like manner and as an important regulator of the immune system. Prolactin has important cell cycle related functions as a growth-, differentiating- and anti-apoptotic factor. As a growth factor binding to cytokine like receptors it has also profound influence on hematopoiesis, angiogenesis and is involved in the regulation of blood clotting through several pathways. In summary, more than 300 separate actions of PRL have been reported in various vertebrates, including effects on water and salt balance, growth and development, endocrinology and metabolism, brain and behavior, reproduction, and immune regulation and protection. Prolactin acts in endocrine, autocrine, and paracrine manner through the prolactin receptor and a large number of cytokine receptors.

Interpretation Causes of increased prolactin concentrations include pituitary tumours, amenorrhoea and / or galactorrhoea, primary hypothyroidism, anorexia nervosa, polycystic ovarian syndrome, renal failure and ectopic production. Women taking oral contraceptives or receiving estrogen therapy can have elevated prolactin concentrations. Stress can falsely elevate prolactin levels. Fasting pooled sample testing is recommended.

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Panel Name : HEALTH SCAN- KNP	Report Date : 25-Apr-2024 07:35AM
Panel Address : PANKI STATION-	Referred Lab : N/A
Sample Type : Serum - 31101262	Referred BY : NA

Test Description	Observed Value	Biological Reference Range
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**THYROID PROFILE**

<b>Triiodothyronine Total (T3)</b> Chemiluminescence Immunoassay (CLIA)	0.95	Adult: 0.60-1.81 ng/ml
<b>Thyroxine Total (T4)</b> Chemiluminescence Immunoassay (CLIA)	7.54	5.01-12.45 ug/dL
<b>TSH (Thyroid Stimulating Hormone)</b> Chemiluminescence Immunoassay (CLIA)-Ultra Sensitive	<b>13.327</b>	0.35-5.50 uIU/ml

**INTERPRETATION :**

- Note:
- 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 time of the day has influence on the measured serum TSH concentrations.
  - Recommended test for T3 and T4 is unbound fraction or free levels as it is metabolically active.
  - Physiological rise in Total T3 / T4 levels is seen in pregnancy and in patients on steroid therapy.

**Clinical Use**

- Primary Hypothyroidism
- Hyperthyroidism
- Hypothalamic – Pituitary hypothyroidism
- Inappropriate TSH secretion
- Nonthyroidal illness
- Autoimmune thyroid disease
- Pregnancy associated thyroid disorders
- Thyroid dysfunction in infancy and early childhood

**COMMENTS:** Assay results should be interpreted in context to the clinical condition and associated results of other investigations. Previous treatment with corticosteroid therapy may result in lower TSH levels while thyroid hormone levels are normal. Results are invalidated if the client has undergone a radionuclide scan within 7-14 days before the test. Abnormal thyroid test findings often found in critically ill clients should be repeated after the critical nature of the condition is resolved.The production, circulation, and disintegration of thyroid hormones are altered throughout the stages of pregnancy.

<b>Follicle Stimulating Hormone (FSH)</b> Chemiluminescence	11.01	Menstruating Females:3.03-8.08 Follicular Phase: 2.5 -10.2 Midcycle Peak:3.4-33.4 Luteal Phase:1.5-9.1 Post Menopausal :23.0-116.3 mIU/mL
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**Comment :**  
Follicle Stimulating Hormone (FSH) regulates the development, growth, pubertal maturation, and reproductive processes of the human body. In both *males* and *females*, FSH stimulates the maturation of germ cells In *males*, FSH induces Sertoli cells to secrete androgen binding proteins (ABPs) and its secretion is being regulated by inhibin's negative feedback mechanism on anterior pituitary gland. In *females*, FSH initiates follicular growth, specifically affecting granulosa cells. With the concomitant rise in inhibin B, FSH levels then decline in the late follicular phase. This seems to be critical in selecting only the most advanced follicle to proceed to ovulation. At the end of the luteal phase, there is a slight rise in FSH that seems to be of importance to start the next ovulatory cycle. Control of FSH release from the pituitary gland is unknown. Low frequency gonadotropin-releasing hormone (GnRH) pulses increase FSH mRNA levels in the rat, however this doesn't directly correlate with

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an increase in circulating FSH. GnRH has been shown to play an important role in the secretion of FSH, with hypothalamic-pituitary disconnection leading to a cessation of FSH. GnRH administration leads to a return of FSH secretion. FSH is subject to oestrogen feed-back from the gonads via the hypothalamic pituitary gonadal axis.



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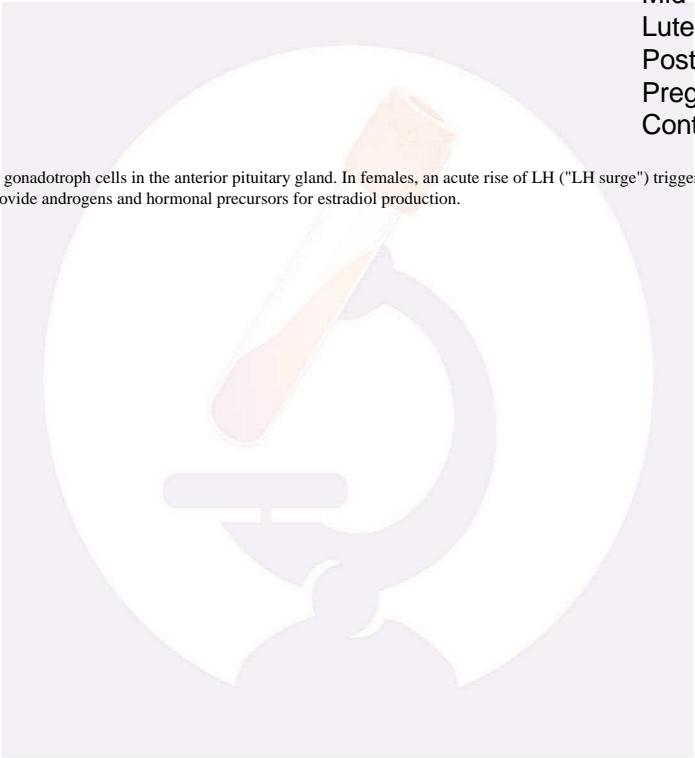


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Panel Address : PANKI STATION-	Referred Lab : N/A
Sample Type : Serum - 31101262	Referred BY : NA

Test Description	Observed Value	Biological Reference Range
<b>LH (leutinizing Hormone)</b> Chemiluminescence Immunoassay(CLIA)	14.45	Follicular Phase: 1.9-12.5 Mid Cycle Peak: 8.7-76.3 Luteal Phase: 0.5-16.9 Post Menopausal: 15.9-54.0 Pregnant:<1.0-1.5 Contraceptives:0.7-5.6 mIU/mL

**Comment**  
Luteinizing Hormone (LH) is a hormone produced by gonadotroph cells in the anterior pituitary gland. In females, an acute rise of LH ("LH surge") triggers ovulation and development of the corpus luteum. LH supports theca cells in the ovaries that provide androgens and hormonal precursors for estradiol production.



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Sample Type : Serum - 31101262	Referred BY : NA

Test Description	Observed Value	Biological Reference Range
<b>Vitamin B12 Level</b> Chemiluminescence Immunoassay(CLIA)	189.00	183-822 pg/mL

### Comments

Vitamin B<sub>12</sub> along with folate is essential for DNA synthesis and myelin formation. Vitamin B<sub>12</sub> deficiency can be because of [nutritional](#) deficiency, malabsorption and other gastrointestinal causes. The test is ordered primarily to help diagnose the cause of macrocytic/ megaloblastic anemia.

<b>Decreased levels are seen in:</b> anaemia, normal near term pregnancy, vegetarianism, partial gastrectomy/ ileal damage, celiac disease, with oral contraceptive use, parasitic competition, pancreatic deficiency, treated epilepsy, smoking, hemodialysis and advancing age	<b>Increased levels are seen in:</b> renal failure, hepatocellular disorders, myeloproliferative disorders and at times with excess supplementation of vitamins pills
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## VITAMIN D

Vitamin D3, 25 Hydroxy Enhanced Chemiluminescence (Ultr Sensitive 4th Generation Chemiflex)	<b>15.16</b>	Deficiency<20 Insufficiency:20-30 Sufficiency : 30 - 100 Intoxication:>100 ng/mL ng/mL
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**Note :** The assay measures both D2 (Ergocalciferol) and D3 (Cholecalciferol) metabolites of vitamin D. · 25 (OH)D is influenced by sunlight, latitude, skin pigmentation, sunscreen use and hepatic function. · Optimal calcium absorption requires vitamin D 25 (OH) levels exceeding 75 nmol/L. · It shows seasonal variation, with values being 40-50% lower in winter than in summer. · Levels vary with age and are increased in pregnancy. · A new test Vitamin D, Ultrasensitive by LC-MS/MS is also available

### Comments :

Vitamin D promotes absorption of calcium and phosphorus and mineralization of bones and teeth. Deficiency in children causes Rickets and in adults leads to Osteomalacia. It can also lead to Hypocalcemia and Tetany. Vitamin D status is best determined by measurement of 25 hydroxy vitamin D, as it is the major circulating form and has longer half life (2-3 weeks) than 1,25 Dihydroxy vitamin D (5-8 hrs)

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

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