

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

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

NAME : Mrs. NEELAM DEVI  
AGE/ GENDER : 35 YRS/FEMALE  
COLLECTED BY :  
REFERRED BY : LOOMBA HOSPITAL (AMBALA CANTT)  
BARCODE NO. : 01512855  
CLIENT CODE. : KOS DIAGNOSTIC LAB  
CLIENT ADDRESS : 6349/1, NICHOLSON ROAD, AMBALA CANTT

PATIENT ID : 1544239  
REG. NO./LAB NO. : 012407100027  
REGISTRATION DATE : 10/Jul/2024 10:38 AM  
COLLECTION DATE : 10/Jul/2024 10:49AM  
REPORTING DATE : 10/Jul/2024 01:16PM

Test Name	Value	Unit	Biological Reference interval
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## ENDOCRINOLOGY

### ESTRADIOL (E2)

ESTRADIOL (E2): SERUM  
by CMIA (CHEMILUMINESCENT MICROPARTICLE IMMUNOASSAY)

14800

pg/mL

FEMALE FOLLICULAR PHASE: 19.5 - 144.2  
FEMALE MID CYCLE PHASE: 63.9 - 356.7  
FEMALE PRE OVULATORY PHASE: 136.0 - 251.0  
FEMALE LUTEAL PHASE: 55.8 - 214.2  
POST MENOPAUSAL: < 50.0

#### INTERPRETATION:

OTHER MATERNAL FACTORS AND PREGNANCY	UNITS	RANGE
Hormonal Contraceptives	pg/mL	15.0 – 95.0
1st Trimester (0 – 12 Weeks)	pg/mL	38.0 – 3175.0
2nd Trimester (13 – 28 Weeks)	pg/mL	678.0 – 16633.0
3rd Trimester (29 – 40 Weeks)	pg/mL	43.0 – 33781.0
Post Menopausal	Pg/mL	< 50.0
MALES:	pg/mL	< 40.0

1. Estrogens are involved in development and maintenance of the female phenotype, germ cell maturation, and pregnancy. They also are important for many other, nongender-specific processes, including growth, nervous system maturation, bone metabolism/remodeling, and endothelial responsiveness.
2. E2 is produced primarily in ovaries and testes by aromatization of testosterone.
3. Small amounts are produced in the adrenal glands and some peripheral tissues, most notably fat. E2 levels in premenopausal women fluctuate during the menstrual cycle.
4. They are lowest during the early follicular phase. E2 levels then rise gradually until 2 to 3 days before ovulation, at which stage they start to increase much more rapidly and peak just before the ovulation-inducing luteinizing hormone (LH)/follicle stimulating hormone (FSH) surge at 5 to 10 times the early follicular levels. This is followed by a modest decline during the ovulatory phase. E2 levels then increase again gradually until the midpoint of the luteal phase and thereafter decline to trough, early follicular levels.

#### INDICATIONS FOR ASSAY: -

1. Evaluation of hypogonadism and oligo-amenorrhea in females.
2. Assessing ovarian status, including follicle development, for assisted reproduction protocols (eg, in vitro fertilization)
3. In conjunction with luteinizing hormone measurements, monitoring of estrogen replacement therapy in hypogonadal premenopausal women
4. Evaluation of feminization, including gynecomastia, in males.
5. Diagnosis of estrogen-producing neoplasms in males, and, to a lesser degree, females



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6. As part of the diagnosis and work-up of precocious and delayed puberty in females, and, to a lesser degree, males
7. As part of the diagnosis and work-up of suspected disorders of sex steroid metabolism, eg: aromatase deficiency and 17 alpha-hydroxylase deficiency
8. As an adjunct to clinical assessment, imaging studies and bone mineral density measurement in the fracture risk assessment of postmenopausal women, and, to a lesser degree, older men
9. Monitoring low-dose female hormone replacement therapy in post-menopausal women
10. Monitoring antiestrogen therapy (eg, aromatase inhibitor therapy).

**CAUSES FOR INCREASED E2 LEVELS:**

1. High androgen levels caused by tumors or androgen therapy (medical or sport performance enhancing), with secondary elevations in E1 and E2 due to aromatization
2. Obesity with increased tissue production of E1
3. Decreased E1 and E2 clearance in liver disease
4. Estrogen producing tumors
5. Estrogen Ingestion

**NOTE:- RECHECK WITH DILUTION.**

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



  
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