



NUTRITIONAL LAB  
SERVICES

PO BOX 4233  
BURWOOD EAST VIC

Lab id : **12345678**

## Test Multi 5

Date of Birth : May 26, 1979

Sex : F




Collected : October 22, 2008

www.nlabs.com.au

Ph: (03) 9803 5335 Fax: (03) 9888 5811

### ENDOCRINOLOGY SALIVA

SALIVA

|                           | <u>Result</u> | <u>Range</u> |        |  |
|---------------------------|---------------|--------------|--------|--|
| <b>Salivary Estrogens</b> |               |              |        |  |
| Estrone (E1)              | 19.6          | 9.6 - 20.0   | pmol/L |  |
| Estradiol (E2)            | 30.7          |              | pmol/L |  |
| Estriol (E3)              | 30.7 *h       | 15.0 - 29.0  | pmol/L |  |
| E1 % total Estrogens      | 24.2          |              | %      |  |
| E2 % total Estrogens      | 37.9          |              | %      |  |
| E3 % total Estrogens      | 37.9          |              | %      |  |
| E3/[E2+E1]                | 0.61 *I       | > 1.00       | RATIO  |  |
| Progesterone (P4)         | 382.7         |              | pmol/L |  |
| P4/E2 Ratio (Saliva)      | 12.5          |              | RATIO  |  |
| Testosterone.             | 205.8 *h      | 25.0 - 190.0 | pmol/L |  |

(\*) Outside reference range.

(h) Above reference range.

(I) Below reference range.



**Saliva Hormone Comments**

SALIVARY HORMONE REFERENCE RANGES: (NOT ON HRT - BASELINE)

|   | E2    | E1     | E3    | Progesterone | DHEAS    |
|---|-------|--------|-------|--------------|----------|
| <b>FEMALE</b>                           |       |        |       |              |          |
| Follicular                              | <18   | 9.6-20 | 15-29 | <318         |          |
| Mid-Cycle                               | 11-29 | 9.6-20 | 15-29 | -            |          |
| Luteal                                  | <18   | 9.6-20 | 15-29 | 318-1590     |          |
| Post Men.                               | <6    | 9.6-20 | 1-41  | <159         | <6.5     |
| Premenopausal, no oral contraceptives   |       |        |       |              | 2.5-25.0 |
| Premenopausal, with oral contraceptives |       |        |       |              | 2.0-8.0  |
| <b>MALE</b>                             |       |        |       |              |          |
|   | <6    | 9.6-20 | 16-25 | <159         | 5.0-30.0 |

TARGET REFERENCE RANGES: (ON HRT - 24hr post last dose)

|           | E2     | E1 | E3        | Progesterone | Testosterone<br>Age Dpndt |
|-----------|--------|----|-----------|--------------|---------------------------|
| Oral      | 7-73   | -  | 69-139    | 318-1590     |                           |
| Patch     | 4-18   | -  | -         | -            |                           |
| Cream/Gel | 37-184 | -  | 1040-1734 | 3180-31797   | F: 277-867<br>M: 347-1734 |

SALIVA E1 (Estrone) is produced primarily from androstenedione originating from the gonads or the adrenal cortex. In premenopausal women, more than 50% of the E1 is secreted by the ovaries. In prepubertal children, men and non-supplemented postmenopausal women, the major portion of E1 is derived from peripheral tissue conversion of androstenedione. Interconversion of E1 & E2 also occurs in peripheral tissue. Bioassay data indicate that the estrogenic action is much less than E2. E1 is a primary estrogenic component of several pharmaceutical preparations, including those containing conjugated and esterified estrogens. In premenopausal women E1 levels generally parallel those of E2. After menopause E1 levels increase, possibly due to increased conversion of androstenedione to E1.

SALIVA E1 is within range.

SALIVA E2 levels for a non-menopausal female should be assessed relative to the day of cycle that the specimen was collected.

SALIVA E2 levels are elevated and suggestive of current supplementation.

Saliva E3 level is elevated for a non-menopausal female. If so, suggest checking estrogen metabolites and consider using indole-3-carbinol/DIM to lower E3 levels. Check serum TSH level. Improving BMI can also help lower estrogen metabolites/E3 levels.

The Estrogen Quotient is low and suggestive of an abnormal estrogen metabolism. Suggest checking morning void urine for E1 metabolites 16OH, 4OH and 2OH metabolites and their ratios. Also check serum TSH and LFT. Use of Indole-3-Carbinol/DIM has been shown to improve estrogen metabolism to correct ratios.

SALIVA The Progesterone level is within range and suggestive of luteal phase. Aim for

(\*) Outside reference range.

(h) Above reference range.

(l) Below reference range.



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a ratio of E2:Prog of 1:200 during this phase of cycle.

**SALIVA Free testosterone level is elevated and suggestive current supplementation with androgen precursors such as testosterone, DHEA or Pregnenolone. If not supplemented then suggestive of Polycystic Ovarian Syndrome, Insulin Resistance, fibroids or endometriosis.**

**NLS Comment**

If indicated, suggest seeking advise from a qualified health care provider.