**TEST PATIENT** - D7BN
Date of Birth : 01-Jan-1962
Sex : F
Collected : 08-Aug-2014

Lab id : 3364670

# ENDOCRINOLOGY SALIVA

SALIVA

## Female Hormone Profile

| Test | Result | Range | Units |
|---|---|---|---|
| Progesterone (P4) | 287.0 | | pmol/L |
| DHEAS. | 14.4 | 2.5 - 25.0 | nmol/L |
| Testosterone. | *221.0* *H | 25.0 - 190.0 | pmol/L |
| Estradiol (E2) | 43.0 | | pmol/L |
| Estrone (E1) | *55.0* *H | 9.6 - 20.0 | pg/mL |
| Estriol (E3) | *49.0* *H | 0.0 - 41.0 | pg/mL |
| E3/[E2+E1] | *0.50* *L | > 1.00 | RATIO |
| P4/E2 Ratio (Saliva) | 6.7 | 4.0 - 108.0 | RATIO |
| Androstenedione/E1 Ratio | *0.03* *L | 0.04 - 1.10 | RATIO |

(*) Result outside normal reference range (H) Result is above upper limit of reference rang (L) Result is below lower limit of reference range

## Saliva Hormone Comments

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

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

SALIVA ESTRONE (E1) 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 and 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.

ELEVATED ESTRONE (E1) LEVEL:
Saliva E1 level is elevated and suggestive of current supplementation. Review dosages and if on Triest consider switching to Biest. Elevated E1 levels should be interpreted relative to the Estrogen quotient. If this is <1 then suggest using Indole-3-carbionol/DIM and check serum TSH level.

ELEVATED E2 LEVEL:
Saliva E2 level is elevated and suggestive of estrogen dominance or supplementation.

ELEVATED E2 LEVEL:
Saliva E2 levels are elevated and suggestive of current supplementation.

ELEVATED ESTRIOL (E3) LEVEL:
Saliva E3 levels are elevated and suggestive of current supplementation, estrogen metabolism or xenoestrogens.

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.

**LOW PROGESTERONE LEVEL:**
**Saliva progesterone level is low and suggestive of the need for supplementation, for a premenopausal patient. Suggest supplementation with 8mg/gram transdermal progesterone (or 80mg oral or troche/day). Aim for a supplemented ratio of E2:Prog of 1:200 (200 parts Progesterone to 1 part estradiol).**

**LOW DHEAS LEVEL:**
**Saliva DHEAs level is below the mean range and suggestive of the need for supplementation with 15mg of DHEA.**
**Maladaption if consistently elevated cortisol. Adrenal fatigue if morning and evening**