



NUTRITIONAL LAB  
SERVICES

PO BOX 4233  
BURWOOD EAST VIC

Lab id : **12345678**

## Test Multi 11

Date of Birth : October 26, 1970

Sex : F

Collected : August 25, 2008

www.nlabs.com.au

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

### INTEGRATIVE MEDICINE

SALIVA

	Result	Range		
<b>Salivary Estrogens</b>				
Estrone (E1)	<b>6.9 *I</b>	9.6 - 20.0	pmol/L	
Estradiol (E2)	<b>5.0</b>		pmol/L	
Estriol (E3)	<b>10.3 *I</b>	15.0 - 29.0	pmol/L	
E1 % total Estrogens	<b>31.1</b>		%	
E2 % total Estrogens	<b>22.5</b>		%	
E3 % total Estrogens	<b>46.4</b>		%	
E3/[E2+E1]	<b>0.87 *I</b>	> 1.00	RATIO	
Progesterone (P4)	<b>469.4</b>		pmol/L	
P4/E2 Ratio (Saliva)	<b>93.9</b>		RATIO	
Testosterone.	<b>54.4</b>	25.0 - 190.0	pmol/L	
Cortisol Morning	<b>8.90</b>	6.00 - 42.00	nmol/L	
Cortisol Midnight	<b>3.90</b>	1.00 - 8.00	nmol/L	
DHEAS Profile AM	<b>4.6</b>	2.5 - 25.0	nmol/L	
DHEAS Profile Evening	<b>&lt;0.1 *I</b>	5.0 - 30.0	nmol/L	
Melatonin (Saliva)-Morning	<b>3</b>	0 - 3	pg/mL	
Melatonin (Saliva)-Midnight	<b>15</b>	10 - 40	pg/mL	

(\* ) Outside 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 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 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 level is below reference range. E1 result should be interpreted relative to the total estrogens. A low E1 is preferable.

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

SALIVA E2 level is low and suggestive of the need for supplementation with 0.5mg of E2 or 1mg Biest.

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

SALIVA Cortisol level is below mean range and suggestive of adrenal insufficiency.

(\*) Outside reference range.

(!) Below reference range.



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This suggests a degree of adrenal hypofunction, maladaptation/abnormal pacing with abnormal HPA. If all four cortisol readings are also low, suspect adrenal fatigue. Suggest supplementation with DHEA and standard adrenal support. In this instance if the Cortisol level does not improve, suggest using Cortisol Acetate/Hydrocortisone supplementation for short interval. Cortisone acetate has a half life of only 4-6 hours. Suggest doses of 20mg in the AM, 10mg midday and 10mg afternoon for a period of up to 3 months and then review levels.

SALIVA DHEAs level is below the mean range and suggestive of the need for supplementation with 25mg of DHEA. If however, testosterone/androgens are elevated, consider 7 Keto form of DHEA.

Maladaptation if consistently elevated cortisol. Adrenal fatigue if morning and evening cortisol only elevated, or if all markers low.

#### SALIVA DHEAS Ranges:

Premenopausal, no oral contraceptives:	2.5 - 25	nmol/L
Premenopausal, with oral contraceptives:	2.0 - 8.0	nmol/L
Postmenopausal:	< 6.5	nmol/L

SALIVA Free testosterone level is low and suggestive of the need for supplementation with 0.5% transdermal testosterone.

SALIVA Melatonin morning level is elevated. Exposure to bright sunlight for 5 minutes in the morning should lower the levels to normal range.

SALIVA Melatonin midnight level is below mean reference range. Suggest supplementation with 1-3 mg melatonin 30 minutes before bed in the evening if indicated.

#### NLS Comment

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