

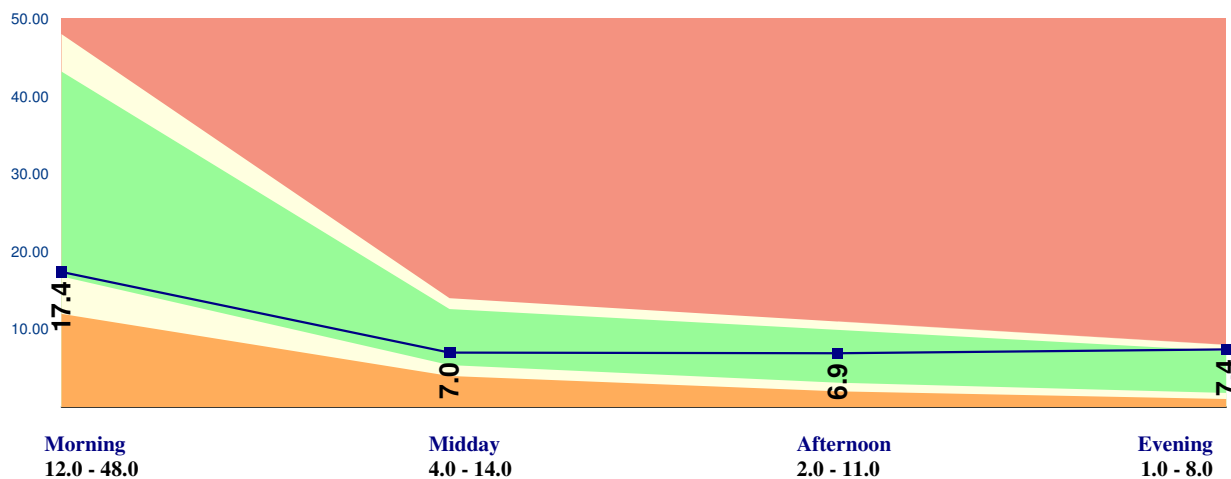


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Date of Birth : 25-Jun-1998  
Sex : F  
Collected : 15/Feb/2022  
Received: 16-Feb-2022  
195 DAWSON STREET  
BRUNSWICK WEST VIC 3055  
Lab id : **3797228** UR#: 6124059

30A CLIFTON GROVE  
COBURG VIC 3058

## ADRENOCORTICES STRESS PROFILE



Cortisol Reference Range - nmol/L

Colour Key Ranges :  
 Above: Red  
 Borderline: Yellow  
 Normal: Green  
 Below: Orange

Cortisol Values	Result		Range
Cortisol Profile, Morning	17.4		12.0 - 48.0 nmol/L
Cortisol Profile, Midday	7.0		4.0 - 14.0 nmol/L
Cortisol Profile, Afternoon	6.9		2.0 - 11.0 nmol/L
Cortisol Profile, Evening	7.4		1.0 - 8.0 nmol/L
Cortisol Daily, Total	38.7		11.0 - 76.0 nmol/L
DHEAS Values	Result		Range
DHEAS Profile Morning	22.2		2.5 - 27.0 nmol/L
DHEAS/CORTISOL AM	1.28*H		0.20 - 0.60 RATIO





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## Adrenocortex Stress Comments

### LOW NORMAL MORNING SALIVA CORTISOL LEVEL:

Saliva morning cortisol level is below mean range and suggestive of adrenal insufficiency. This suggests a degree of adrenal hypofunction, maladaptation/abnormal pacing with abnormal HPAA. If all four cortisol readings are also low, suspect adrenal fatigue. Suggest supplementation with DHEA and standard adrenal support.

Investigate melatonin and GABA levels.

### LOW/LOW NORMAL MIDDAY CORTISOL LEVEL:

Midday Cortisol level is below mean range and suggestive of adrenal insufficiency. This suggests suboptimal adrenal functioning, and if accompanied by low evening cortisol and low DHEA, suspect adrenal fatigue. Suggest supplementation with DHEA and standard adrenal support.

### LATE AFTERNOON CORTISOL LEVEL IS WITHIN RANGE:

Late afternoon cortisol level is adequate and within range.

### EVENING CORTISOL LEVEL WITHIN RANGE:

Saliva evening cortisol level is normal and within range.

SALIVA DHEAs level is adequate and within range.

### SALIVA DHEAs/CORTISOL RATIO - HIGH

An increase in DHEAs/Cortisol ratio, was found in patients suffering from panic disorders.

Suspect: An abnormal physiological response to stress, with shifting of the steroidogenic pathway to DHEA at the expense of cortisol.

Consider the following options:

Lifestyle changes:

Stress reduction: chronic stress can fatigue the adrenals Rest, exercise, prayer, meditation, relaxation exercises.

Dietary changes:

Balance blood sugar: Lower calorie, high protein, high complex carbohydrate and high fiber diet.

Nutritional supplements: High-grade multivitamin and mineral. Additional Vitamin C, Vitamin B5, Vitamin B6, and zinc, as indicated.

Herbal Support\*:

"Adaptogenic" herbs: American or Korean ginseng (*Panax spp.*), Siberian ginseng (*Eleutherooccus senticosus*), Withania (*Withania somnifera*)

Miscellaneous herbs:

Licorice (*Glycyrrhiza glabra*) to prolong the half-life of cortisol, Sarsaparilla (*Smilax spp.*) is a cortisol precursor

Glandular Support\*:

Adrenal, pituitary, others as indicated

Hormone replacement therapy\*:

Cortisol, DHEA, pregnenolone, as indicated

\*For herbal, glandular & hormone replacement therapy, it is important to preserve or restore circadian rhythm by dosing in morning. May give 1/3 to 1/2 of morning dose at noon. Dosing later than noon is not advised.

Consider measuring testosterone and/or estradiol levels and intervene if necessary.



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**SALIVA DHEAS Ranges:**

Premenopausal, no oral contraceptives:	2.5 – 27.0 nmol/L
Premenopausal, with oral contraceptives:	2.0 – 8.0 nmol/L
Postmenopausal:	1.8 – 18.5 nmol/L

(\*) Result outside normal reference range

(H) Result is above upper limit of reference rang



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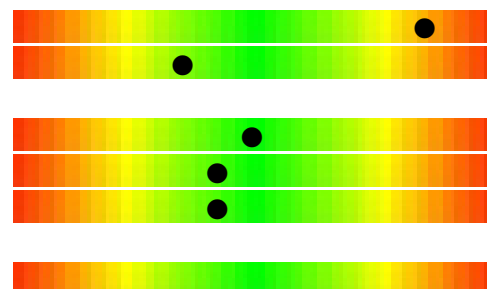
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## ENDOCRINOLOGY SALIVA

### SALIVA

	Result	Range
<b>Progesterone (P4)</b>	<b>1710.0</b>	276.0 - 1725.0 pmol/L
<b>Testosterone.</b>	<b>81.9</b>	60.0 - 191.0 pmol/L
<b>Salivary Estrogens</b>		
<b>Estradiol (E2)</b>	<b>9.4</b>	3.7 - 18.0 pmol/L
<b>Estrone (E1)</b>	<b>28.5</b>	9.5 - 71.0 pmol/L
<b>Estriol (E3)</b>	<b>19.7</b>	7.7 - 49.0 pmol/L
<b>E3/[E2+E1]</b>	<b>0.52 *L</b>	> 1.00 RATIO
<b>P4/E2 Ratio (Saliva)</b>	<b>181.7 *H</b>	4.0 - 108.0 RATIO



(\*) Result outside normal reference range

(H) Result is above upper limit of reference range (L) Result is below lower limit of reference range



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## Saliva Hormone Comments

**\*\* PLEASE NOTE NEW REFERENCE RANGES AS OF 20.08.2021 \*\***

**TABLE 1: SALIVARY HORMONE REFERENCE RANGES: (NOT ON HRT - BASELINE)**

FEMALE	Progesterone	DHEAS	E2	E1	E3
Pre/menarcheal	90-390		3.1-13	9.5-71	7.7-49
Follicular	90-480		3.1-17	9.5-71	7.7-49
Mid-Cycle	85-590		5.0-22	9.5-71	7.7-49
Luteal	276-1725		3.7-18	9.5-71	7.7-49
Post Menop.	80-820	1.8-18.5	3.7-16	9.0-65	9.0-62
Premenopausal, No OC's		2.5-27.0			
Premenopausal, with OC's		2.0-8.0			
MALE	<230	5.0-32.0	2.7-11	7.7-50	6.6-38

**TABLE 2: TARGET REFERENCE RANGES: (ON HRT - 24 to 48 hr post last dose)**

	Progesterone	Testosterone	E2	E1	E3
Oral	320-1998		7-73		69-139
Patch	-		4-18	-	-
Cream/Gel	3180-15000	F: 277-867 M: 347-1734	37-184	-	1040-1734

**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.

**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** level is adequate and within range.

**Saliva E3** level is within range and adequate.

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.

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**SALIVA** The Progesterone level is within range and suggestive of luteal phase. Aim for a ratio of E2:Prog of 1:200 (200 parts Progesterone to 1 part Estradiol) during this phase of cycle.

**LOW NORMAL TESTOSTERONE LEVEL:**

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

Tests ordered: SADREN,5Horm

FINAL REPORT on 21 Feb 2022

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