NutriPATH PATHOLOGY · PATIENT REPORT
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25342-0065

Dr Test Doctor (Test Doctor) Test Clinic. 123 Test Street, Test Suburb Victoria 3125

Lab ID
Patient ID PAT-100009
Ext ID 25342-0065

Test Patient

Sex: Male • 45yrs • 01-Jan-80
123 Home Street, Test Suburb Vic 3125

RECEIVED
08-Dec-25

FEMALE HORMONES, BASIC

Specimen type - Saliva

Collected
05-Dec-25

FEMALE HORMONES, BASIC

TEST	RESULT	H/L	REFERENCE	UNITS
Progesterone (P4)	228.0		(43.2-723.0)	pmol/L
DHEA-S	3.3		(1.8-18.0)	nmol/L
Testosterone (TT)	35.0		(10.0-90.0)	pmol/L
Estradiol (E2)	14	H	(1.9-12.0)	pmol/L
Estrone (E1)	33.0	H	(3.9-25.5)	pmol/L
Estriol (E3)	18.0	H	(0.0-15.0)	pmol/L

Hormone Ratios

TEST	RESULT	H/L	REFERENCE	UNITS
Estrogen Quotient - E3/[E2+E1]	0.38	L	(>0.40)	ratio
P4/E2 Ratio	16.3		(4.0-300.0)	ratio

Saliva Hormone Reference Ranges

Table 1: SALIVA HORMONE REFERENCE RANGES (Not on HRT - Baseline)

FEMALE	Progesterone (P4)	DHEA-S	Androstenedione	Testosterone (TT)	Estradiol (E2)	Estrone (E1)	Estriol (E3)
Pre/menarcheal	13 - 163	1.8 - 18	0.05 - 0.50	10 - 90	1.6 - 8.9	3.9 - 25.0	0.0 - 15.0
Follicular Phase	13 - 201	1.8 - 18	0.05 - 0.50	10 - 90	1.6 - 12.0	3.9 - 25.0	0.0 - 15.0
Mid-Cycle	13 - 247	1.8 - 18	0.05 - 0.50	10 - 90	2.6 - 14.7	3.9 - 25.0	0.0 - 15.0
Luteal Phase	43.2 - 723	1.8 - 18	0.05 - 0.50	10 - 90	1.9 - 12.0	3.9 - 25.0	0.0 - 15.0
Post Menopausal	14 - 241	1.0 - 16.0	0.05 - 0.40	10 - 85	1.2 - 3.5	1.9 - 19.4	0.0 - 11.8
Pre Menopausal, with OC's	13 - 216	1.4 - 5.3	-	-	1. 0 - 6.0	-	-

Table 2: TARGET REFERENCE RANGES (On HRT, 24 - 48 hours post last dose)

Type of HRT	Progesterone (P4)	Testosterone (TT)	Estradiol (E2)	Estrone (E1)	Estriol (E3)
ORAL	104 - 619	-	2.7 - 55.4	2.1 - 34.5	50.0 - 400.0
PATCH	-	-	1.9 - 12.0	-	-
CREAM/GEL	F: 1089 - 8349	F: 199 - 1879	19.0 - 120.0	-	50.0 - 1000.0
	M: 225 - 2263	M: 249 - 3759	-	-	-
SYNTHETIC HRT	43.2 - 216	-	1.0 - 6.0	-	-

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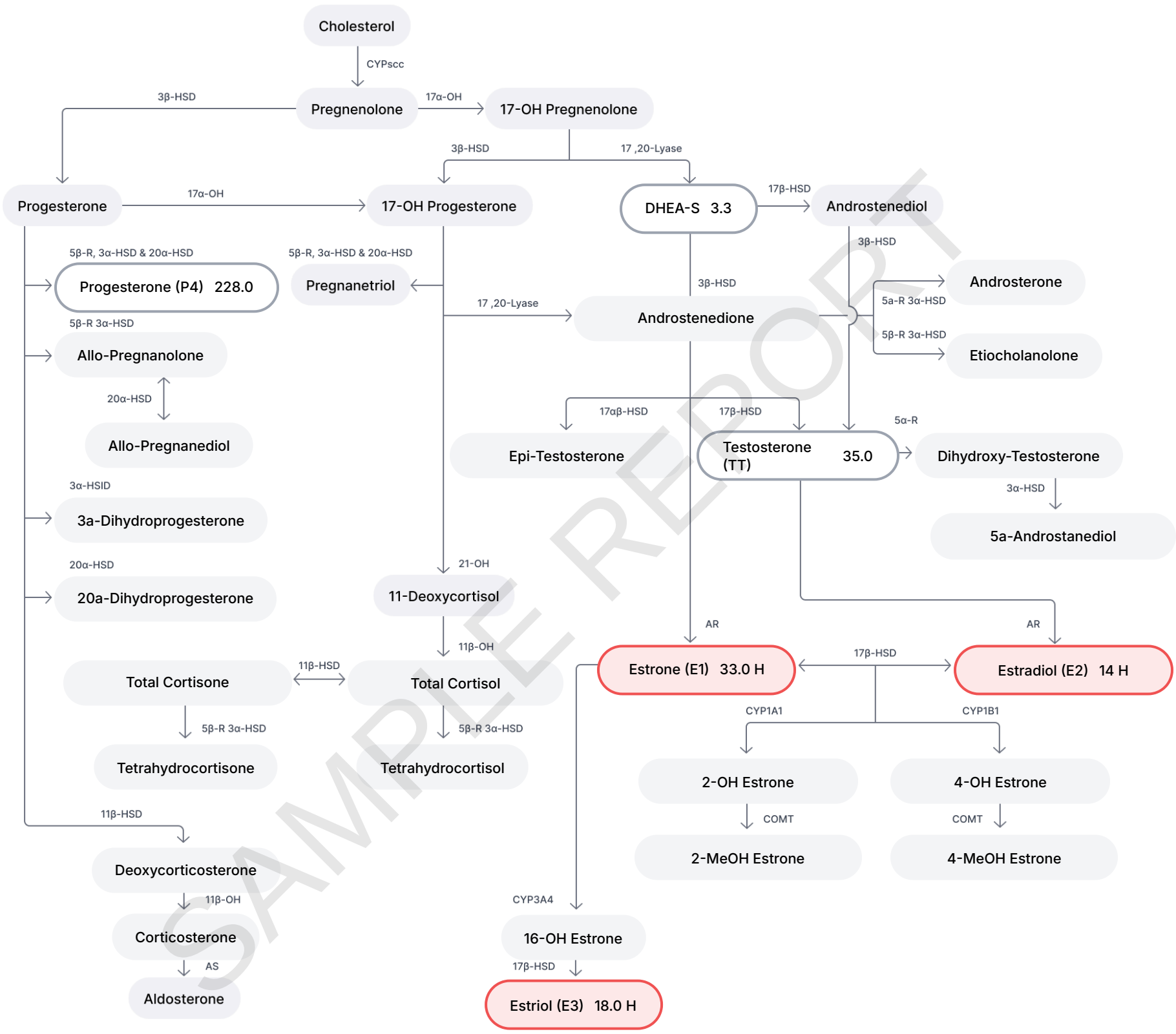

Legend Hormone not tested | Within range | Out of range | L = Low, LL = Critically Low | H = High , HH = Critically High

Enzyme Abbreviations

5α-R	5a-Reductase	**3α-HSD**	3α-Hydroxysteroid dehydrogenase	**AR**	Aromatase
5β-R	5β-Reductase	**3β-HSD**	3β-Hydroxysteroid dehydrogenase	**AS**	Aldosterone Synthase
11β-oH	11β-Hydroxylase	**11β-HSD**	11β Hydroxysteroid dehydrogenase	**CYP**	Cytochrome p450 (scc, 1A1, 1B1 & 3A4)
17α-OH	17α-Hydroxylase	**17α-HSD**	17α-Hydroxysteroid dehydrogenase	**COMT**	Catechol-O-Methyl-Transferase
17,20-Lyase	Same enzyme as 17α-OH	**17β-HSD**	17β-Hydroxysteroid dehydrogenase		
21-OH	21-Hydroxylase	**20α-HSD**	20α-Hydroxysteroid dehydrogenase		

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Saliva Hormones Comment

DHEA-S LOW/LOW NORMAL:

Salivary DHEA-S is below the expected range for a premenopausal woman. DHEA-S, secreted by the adrenal glands, serves as a precursor to both estrogens and androgens, supporting adrenal function, energy, bone health, immunity, and mood.

Low DHEA-S may manifest as fatigue, low libido, decreased resilience to stress, cognitive difficulties, and reduced bone or muscle mass.

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

Treatment Considerations:

Hormonal: DHEA supplementation under medical supervision (typical oral dose 25-50mg/day); 25mg of DHEA for 1 month.
Consider using 7Keto form of DHEA if testosterone/androgens are elevated.

Lifestyle/Natural: Stress management, sufficient sleep, regular exercise, balanced diet, and adaptogenic support (e.g. ashwagandha) where appropriate.

TESTOSTERONE (TT) NORMAL:

Saliva testosterone level for a female is within range and adequate.

ESTRADIOL (E2) ELEVATED:

Salivary estradiol is above the expected reference range for a premenopausal woman. Estradiol is the most potent estrogen in reproductive years, regulating menstrual cycles, bone and cardiovascular health, and cognitive function.

High estradiol may manifest as heavy or irregular periods, breast tenderness, fluid retention, mood changes, and increased risk of estrogen-sensitive disorders. Causes may include exogenous estrogen therapy, ovarian cysts, or impaired estrogen clearance.

Management Considerations:

Hormonal: Evaluate current hormone therapy or oral contraceptives; dose adjustment may be indicated.

Lifestyle/Natural: Maintain healthy weight, increase dietary fiber, support liver function (adequate hydration, cruciferous vegetables), and limit alcohol.

ESTRONE (E1) ELEVATED:

Salivary estrone is above the expected reference range for a premenopausal woman. Estrone is an estrogen primarily produced by the ovaries and peripheral tissues, acting as a precursor to estradiol and contributing to menstrual regulation, bone health, and reproductive function.

High estrone may be associated with heavy menstrual bleeding, breast tenderness, bloating, mood swings, and increased risk of estrogen-sensitive conditions. Potential causes include exogenous estrogen therapy, ovarian hyperactivity, or impaired metabolism of estrogens.

Management Considerations:

Hormonal: Review and adjust exogenous estrogen therapy if applicable.

Lifestyle/Natural: Weight management, increased fiber intake to support estrogen metabolism, regular exercise, and avoidance of xenoestrogens (e.g., plastics, certain personal care products).

ESTRIOL (E3) ELEVATED:

Salivary estriol is above the expected reference range for a premenopausal woman. Estriol is a weaker estrogen metabolite, primarily formed peripherally from estradiol and estrone, and contributes to urogenital health and mild estrogenic activity.

High estriol may be associated with mild estrogen excess symptoms, such as breast tenderness, bloating, or mild mood changes. Causes may include supplementation, enhanced peripheral conversion, or altered liver metabolism.

Treatment Considerations:

Hormonal: Reassess estrogen-containing therapies.

Lifestyle/Natural: Support estrogen metabolism with fiber-rich diet, weight management, and regular exercise.

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E3/(E1 + E2) RATIO LOW

The ratio of estriol (E3) to total estrogens (E1 + E2) is below the expected range. This ratio reflects the balance of weaker versus more potent estrogens in circulation, with lower ratios potentially indicating reduced peripheral metabolism of estradiol/estrone to estriol. Consider further investigations with serum TFT's and serum LFT's.

Methodology

Liquid Chromatography-Mass Spectrometry (LC-MS/MS/MS)