Nordic Laboratories

PATIENT:	**Sample Report**			TEST REF:	**TST-##-#####**
TEST NUMBER:	##########	COLLECTED:	dd/mm/yyyy	PRACTITIONER:	**Nordic Laboratories**
PATIENT NUMBER:	##########	RECEIVED:	dd/mm/yyyy		
GENDER:	Male	TESTED:	dd/mm/yyyy	ADDRESS:	
AGE:	61				
DATE OF BIRTH:	dd-mm-yyyy				

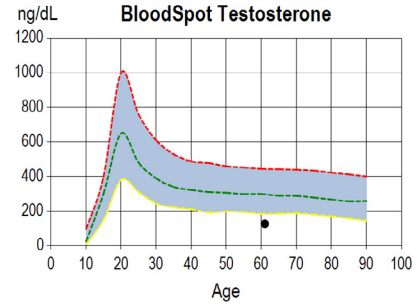
TEST NAME: Male Blood Profile II (E2, T, DS, C, SHBG, PSA, TSH, FT3, FT4, & TPO)

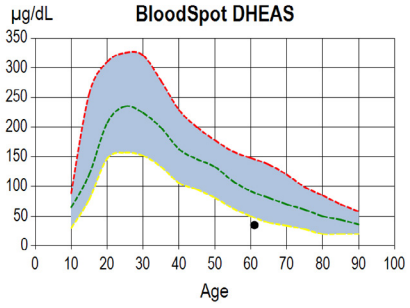
Test Name	Result		Units	Range
Estradiol (Blood Spot)	<10	L	pg/mL	12-56
Testosterone (Blood Spot)	128	L	ng/dL	400-1200 (Age Dependent)
Ratio: T/SHBG (Blood Spot)	0.1	L		.7 - 1.0
DHEAS (Blood Spot)	35	L	µg/dL	70-325
SHBG (Blood Spot)	34		nmol/L	15-50
Cortisol (Blood Spot)	22.0	H	µg/dL	8.5-19.8 (morning), 3.3-8.5 (evening/night)
PSA (Blood Spot)	<0.5		ng/mL	<0.5-4 (optimal 0.5-2)
Free T4 (Blood Spot)*	1.4		ng/dL	0.7-2.5
Free T3 (Blood Spot)	3.3		pg/mL	2.4-4.2
TSH (Blood Spot)	2.2		µU/mL	0.5-3.0
TPOab (Blood Spot)*	17		IU/mL	0-150 (70-150 borderline)
Vitamin D, 25-OH, D2 (Blood Spot)	<4		ng/mL	<4 if not supplementing (< 10 nmol/L)
Vitamin D, 25-OH, D3 (Blood Spot)	50		ng/mL	32-100 ng/ml (80-250 nmol/L)
Vitamin D, 25-OH, Total (Blood Spot)	50		ng/ml	32-100

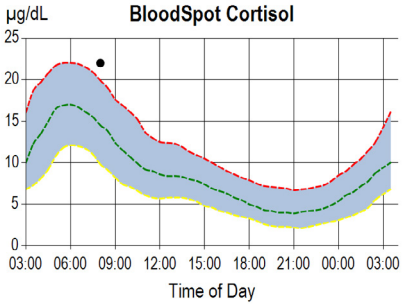
<dL = Less than the detectable limit of the lab.
N/A = Not applicable; 1 or more values used in this calculation is less than the detectable limit.
**For research purposes only.*

Therapies
None Indicated

Disclaimer: Graphs below represent hormone levels in testers not using hormone supplementation and are provided for informational purposes only. Please see comments for additional information if results are higher or lower than expected. Graph key ---High ---Avg ---Low







Nordic Laboratories Aps
Nygade 6, 3.sal · 1164 Copenhagen K · Denmark
Tel: +45 33 75 10 00

UK Office:
11 Old Factory Buildings · Stonegate · E. Sussex TN5 7DU · UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

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TEST NAME: Male Blood Profile II (E2, T, DS, C, SHBG, PSA, TSH, FT3, FT4, & TPO)

2017 01 01 001 B **Sample Report**

Lab Comments

Estradiol (blood spot) is lower than range for a male. Symptoms/conditions associated with persistently low estrogens include hot flashes, night sweats, and bone loss. Low estradiol can be attributed to low aromatase, caused by genetic conditions or use of natural (herbal) or medicinal aromatase inhibitors.

Testosterone is low and the Free Testosterone Index (FTI), determined by the ratio of testosterone to SHBG (FTI = T/SHBG) is also lower than the optimal range of 0.7-1.0 seen in the majority of healthy young males. A low FTI indicates that the free fraction of testosterone, the portion of testosterone that escapes blood binding proteins and is available to target tissues, is also low. Low testosterone in men is commonly seen beginning in the fourth decade of life, and is associated with symptoms of aging referred to as andropause. The expected blood (blood spot, serum, or plasma) levels for testosterone in a male range from 250 to 1200 ng/dL; however, when values drop below about 350-400 ng/dL symptoms of andropause are more frequent. Testosterone is an important anabolic hormone that helps to maintain both physical and mental health: it prevents fatigue, helps to maintain a normal sex drive, increases the strength of all structural tissues (skin, bone, muscles, heart) and prevents depression and mental fatigue. Testosterone deficiency is associated with symptoms such as erectile dysfunction, decreased sex drive, and decreased mental and physical ability, apathy, and loss of muscle mass. Low testosterone in men is closely associated with insulin resistance/metabolic syndrome. Stress management, exercise, proper nutrition, dietary supplements (particularly adequate zinc and selenium), and androgen replacement therapy (testosterone) have all been shown to raise androgen levels in men and help counter andropause symptoms. Testosterone therapy is worthwhile considering if PSA is within normal range. Weight reduction with proper diet and exercise, and stress reduction (lowers cortisol) are important components to androgen replacement therapy.

DHEAS (blood spot) is lower than the reference range. Blood DHEAS levels are highest in the late teens to early twenties in both males and females and levels steadily decline with age. The reference range spans expected levels from youth (upper limits) to old age (lower limits). A very low DHEAS at any age could indicate adrenal dysfunction. Low DHEAS is often associated with low testosterone (DHEA is a testosterone precursor) and symptoms of androgen deficiency (fatigue, depression, vaginal dryness, low libido, loss of muscle mass, bone loss, memory lapses). If symptoms of androgen deficiency are/become problematic consider DHEA therapy.

SHBG is within normal range. The SHBG level is a relative index of overall exposure to all forms of estrogens (endogenous, pharmaceutical, xeno-estrogens). As the estrogen levels increase there is a proportional increase in hepatic production of SHBG. SHBG binds tightly to testosterone and its more potent metabolite dihydrotestosterone (DHT). It also binds tightly to estradiol, the most potent of the endogenous estrogens, but about 5 times weaker than to testosterone and DHT. Thus an increase in SHBG results in proportionately less bioavailable testosterone than estradiol. The ideal ratio of testosterone to SHBG in males is 0.7-1. As men age testosterone levels drop and SHBG levels increase, resulting in a lower testosterone/SHBG ratio. Andropausal symptoms are often caused by the lower bioavailable level of testosterone.

Morning cortisol (blood spot) is high. If symptoms of adrenal imbalance are problematic consider testing cortisol in saliva 4x throughout the day to determine if levels remain high. If salivary cortisol levels drop following the morning sample this suggests low adrenal reserve and need for adrenal support. If levels remain high, consider means to lower cortisol (e.g. stress reduction, phosphatidyl serine, androgen or thyroid therapy if levels of these hormones are low-both lower cortisol).

PSA (Prostate Specfic Antigen) is within normal range.

Thyroid hormones (free T4, free T3, TSH) and thyroid peroxidase antibodies are within normal ranges; however, this does not exclude the possibility of a functional thyroid deficiency if symptoms are problematic.

Vitamin D3 is within the range which many experts consider normal (32-100 ng/ml). This lab result is within the ranges considered optimal for health (50-80 ng/ml). Vitamin D deficiency has been closely associated with a wide range of conditions and diseases (for review see: Holick MF. NEJM 357: 266-281, 2007).

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